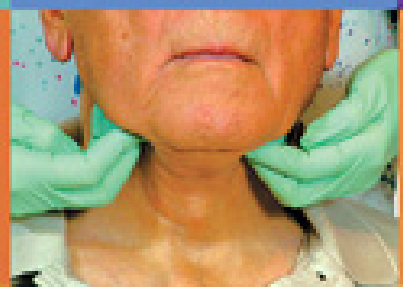


Patient Assessment Tutorials

**A STEP-BY-STEP GUIDE
FOR THE DENTAL HYGIENIST**



**Second
Edition**



Jill S. Nield-Gehrig



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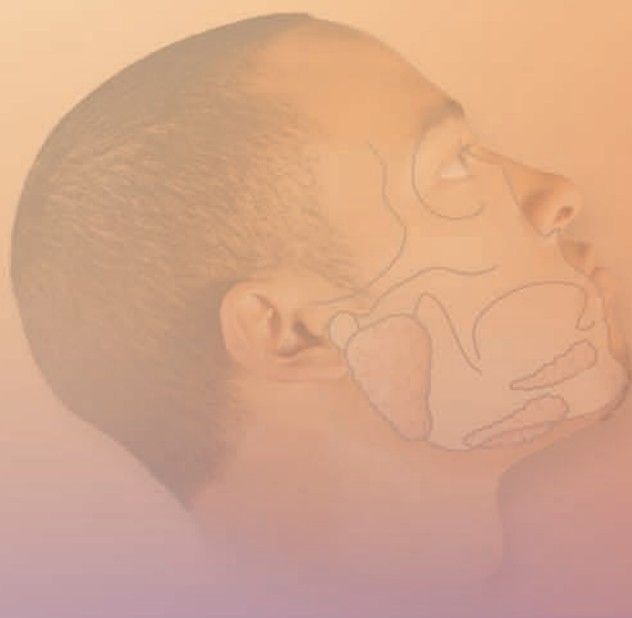
- 1** Communication Skills for Assessment
- 2** Making Our Words Understandable
- 3** Overcoming Communication Barriers
- 4** Medical History
- 5** Ready References: Medical History
- 6** Dental Health History
- 7** Vital Signs: Temperature
- 8** Vital Signs: Pulse and Respiration
- 9** Vital Signs: Blood Pressure
- 10** Tobacco Cessation Counseling
- 11** Soft Tissue Lesions
- 12** Head and Neck Examination
- 13** Oral Examination
- 14** Gingival Description
- 15** Mixed Dentition and Occlusion
- 16** Dental Radiographs
- 17** Comprehensive Patient Cases F–K

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The author, editors, and publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accordance with the current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new or infrequently employed drug.

Some drugs and medical devices presented in this publication have Food and Drug Administration (FDA) clearance for limited use in restricted research settings. It is the responsibility of the health care provider to ascertain the FDA status of each drug or device planned for use in his or her clinical practice.

Dedication

This book is dedicated to **Dr. Don Rolfs** of Wenatchee, WA, a periodontist known for his long career of evidence-based, humanistic periodontal care. A modern-day renaissance man, Don Rolfs is a scholar, educator, fine furniture craftsman, naturalist, butterfly collector, and loving grandfather to Freya. Dr. Don Rolfs is an inspiration to all dental health care providers to never stop growing, learning, and embracing life to the fullest.

Preface for Course Instructors

Patient Assessment Tutorials: A Step-By-Step Guide for the Dental Hygienist, Second Edition, is a detailed instructional guide to patient assessment procedures. *Tutorials* is unique in two regards: first, the Peak Procedures sections teach the “how to” of patient assessment procedures in a clear step-by-step manner; second, *Tutorials* places a unique emphasis on the human element of patient assessment. Content on the human interaction aspect of patient assessment includes two chapters on communication, as well as the Human Element sections and communication role-plays throughout the book.

Patient Assessment Tutorials is designed for student use in two settings. Initially, the modules are designed to guide student practice of assessment and communication techniques in preclinical and clinical settings. Later, the Ready References from the modules—when laminated and assembled in a notebook—create a reference book that provides quick access to information during patient treatment.

FEATURES

Patient Assessment Tutorials: A Step-By-Step Guide for the Dental Hygienist has many features designed to facilitate learning and teaching.

- 1. Module Overview and Outline.** Each module begins with a concise overview of the module content. The module outline makes it easier to locate material within the module. The outline provides the reader with an organizational framework with which to approach new material. Learning objectives assist students in recognizing and studying important concepts in each chapter.
- 2. Peak Procedures.** Step-by-step instructions are provided for each patient assessment procedure.
 - For students, the Peak Procedures section provides a straightforward, step-by-step guide for practicing and perfecting assessment techniques. The self-instructional format allows the learner to work independently—fostering student autonomy and decision-making skills.
 - For educators, the Peak Procedures section provides a reliable, evidence-based blueprint for the standardization of faculty members in the instruction and evaluation of patient assessment procedures.

- 3. Ready References.** The Ready References provide rapid access to important information on each assessment topic. For example, there is a Ready Reference with the most commonly prescribed medications. The Ready Reference features are designed to be removed from the book, laminated or placed in plastic page protectors, and assembled in a notebook for use in the clinical setting.
- 4. The Human Element.** This module feature focuses on the “people part” of patient assessment. Students, patients, and experienced clinicians were invited to share their experiences in this section of the modules. The features *Through the Eyes of a Student*, *Through the Eyes of a Patient*, and *Advice from an Experienced Clinician* speak to the human element of the assessment process. In these real-life accounts, students share their struggles and triumphs with patient assessment procedures. Patient accounts evoke empathy and pride in the impact of caregiving. In addition, this section provides a means for experienced practicing clinicians to pass on tips on assessment to students who are anxious to perfect these skills.
- 5. Internet Sites for Information Gathering.** A list of Internet sites in each module encourages students to develop skills in online information gathering. With the rapid explosion of knowledge in the dental and medical sciences, a student can no longer expect to learn everything that he or she needs to know, now and forever, in a few years of professional training. Reference books in print cannot be relied upon for the most up-to-date information. Therefore, students must learn how to quickly retrieve accurate information from reliable Internet sites, such as MEDLINE.
- 6. English-to-Spanish Phrase Lists.** As the Spanish-speaking population increases, clinicians encounter growing numbers of Spanish-speaking patients in dental clinics and offices. Teaching students to pronounce and speak Spanish is well beyond the scope of this book. For those times when a trained translator is not available, however, the modules include English-to-Spanish phrase lists with phrases pertinent to the assessment process. To use these phrase lists, the student clinician simply points to a specific phrase in the list to facilitate communication with a Spanish-speaking patient.
- 7. Fictitious Patient Cases A–E.** Fictitious Patient Cases A–E promote the student’s application of chapter information to patient care, much in the same way that he or she needs to do when caring for a real patient. With each module, more information is revealed about each patient’s assessment findings. For example, Module 4 reveals the medical histories of fictitious Patients A–E. Module 9 provides the patients’ blood pressure readings. This progressive disclosure of assessment findings parallels the manner in which students collect information on a patient in the clinical setting, gleaning new nuggets of information with each assessment procedure performed. In each module, the student is asked to interpret the assessment findings

revealed in the module, relate it to information about the patient from previous chapters, and make decisions about patient care based upon these assessment findings.

8. Quick Questions. The Quick Questions feature at the end of each module provides a quick review of chapter content.

9. Skill Check. The Module Skill Evaluation procedure checklists allow a student to self-evaluate his or her strengths and limitations in performing the assessment procedure and to identify additional learning needs. The checklists also provide benchmarks for instructor evaluation of student skill proficiency. **Suggestions for communication role-plays are provided on the Instructor Resource CD for this textbook.** Communication checklists in the modules allow students to practice and self-evaluate their communication skills and to identify areas for improvement. The checklists also provide benchmarks for instructor evaluation of student skill proficiency in communicating with patients.

10. Terminology and Glossary of Terms. Terminology pertinent to patient assessment is highlighted in bold type and clearly defined within each module. The Glossary in the back of the book provides quick access to terminology.

11. Comprehensive Fictitious Patient Cases F–K. Module 17 of the book is comprised of comprehensive patient cases. This module presents an entirely new comprehensive patient case. All patient assessment data gathered for a patient is presented and the student is challenged to interpret and use the assessment information in care planning for the patient.

Additional Resources

Patient Assessment Tutorials, Second Edition, includes additional resources for both instructors and students that are available on the book's companion website at <http://thePoint.lww.com/NieldGehrigPAT2e>.^{*} All the additional resources were updated by the book's author, Jill Nield-Gehrig.

INSTRUCTORS

Approved adopting instructors will be given access to the following additional resources:

- Image Bank
- PowerPoint Presentations
- Test Generator Questions
- Video clips showing proper head, neck, and oral examination techniques
- Morita CBCT Viewer
- Practical Focus Case Studies, Patient Case Studies, and Active Learning Cases
- Role-Playing Exercises
- Instructions on how to use the textbook and instructor resources
- Answers to the Quick Questions found in the textbook
- WebCT- and Blackboard-ready cartridges

STUDENTS

Students who have purchased *Patient Assessment Tutorials*, Second Edition, have access to the following additional resources:

- Video clips showing proper head, neck, and oral examination techniques
- Morita CBCT Viewer

In addition, purchasers of the text can access the searchable full text online by going to <http://thePoint.lww.com/NieldGehrigPAT2e>. See the inside front cover of this text for more details, including the passcode you will need to gain access to the website.

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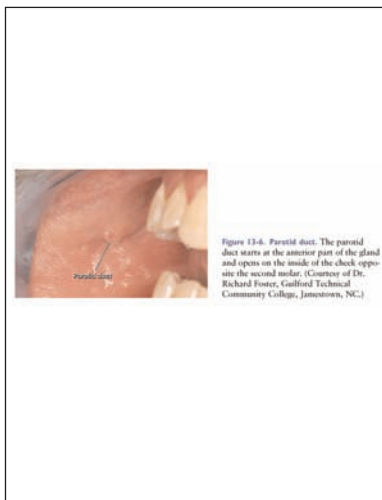
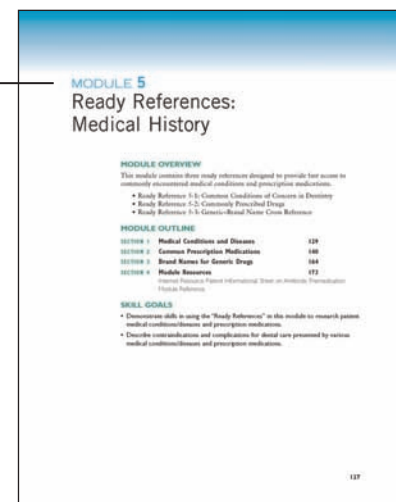
User's Guide

The ability to accurately assess patients is vital to the practice of Dental Hygiene—a complete and accurate assessment is the starting point to providing thorough patient care. *Patient Assessment Tutorials: A Step-by-Step Guide for the Dental Hygienist* takes you through the process of patient assessment, and provides you with information on both the actual physical assessment as well as effective patient communication. The highly visual, step-by-step style teaches you vital assessment processes quickly and thoroughly.

YOU'LL FIND THESE GREAT FEATURES IN THE TEXT:

Module Overviews – Module Outlines – Skill Goals

Give an orientation to the information in the chapter and what you are expected to know after reading the chapter material. ►



► Detailed Illustrations & Photographs

Bring the material in the book to life, and help to visually guide you through the patient assessment process.

Outline procedures in an easy-to-follow, step-by-step format. Lists of necessary equipment and a rationale for each step are also provided. ►



MODUL 12 HEAD AND NECK EXAMINATION 433

Procedure 12-1. Head and Neck Examination

EQUIPMENT:

Gloves and optional overgown

Stand at the patient for patient use during thyroid exam

SUBGROUP 1: OVERALL APPRAISAL OF HEAD, NECK, FACE, AND SKIN

ACTION

1. General Appraisal. While seating and chatting with the patient, unconsciously inspect the skin and facial symmetry of the face and neck.

If problems are detected, question the patient about the onset, duration, and possible causes of any surface variations of the skin, such as lesions or sores.

RATIONALE

Figure 12-18.

2. Preparation and Positioning. Position the patient in an upright, seated position. The patient should support his or her head in an upright position rather than resting it against the backrest.
 - Ask the patient to remove jewelry and loosen clothing that limits examination of the neck. Wash and dry hands, don gloves.
 - Document observations at this time if optional.
3. Provide Information. Briefly explain the examination procedures to the patient.
 - An upright head position makes the structures of the neck stand out for easier examination.
 - The height of the patient's chair should be positioned so that the clinician can easily reach all the structures to be examined.
 - Gloves prevent direct contact with open wounds, cuts, sores, or contagious skin conditions.
 - Loosening overgarments at this time facilitates moving directly from the head and neck examination to the internal examination. The overgarments are removed before proceeding to the internal examination.
4. Reduce patient apprehensions and encourage patient cooperation.
 - Lesions and blemishes on the common conditions that may be detected on the skin and scalp of the head.
 - The ears are common sites for lesions, such as basal cell carcinoma.
5. Head, Scalp, and Ears. Change your position so that you are standing directly behind the patient. Visually inspect the head and scalp for any abnormalities; inspect the ears.

MODERATOR: HYPOTHESIS, DEDUCTION AND REGISTRATION 243

SECTION 4 THE HUMAN ELEMENT

Box 8.1: Through the Eyes of a Student

It was my first assignment with this [I prepared for the assignment I noted that it was a 12 page call and had a history of ongoing heart failure. When I received the 12 responses, he seemed breathless and he was having some difficulty in breathing. He seemed to be tired even though this was a morning assignment. I noticed the blood color so that he could not write. Just the third paragraph down it was in a vague position. [I] seemed to have some difficulty breathing and he asked to sit upright again.

I seemed to get on with the assignment because I was worried about anything of my own importance. Something in the back of my mind however, had telling me that I should be concerned about this. I started thinking I should be able to get assignments to my own, especially [I] believed what an audience and the personality involved [I] in the hospital, I saw I received a response and then this. I felt my own for the situation was significant and feeling that my entire topic was used by [I] I noticed that they were some weird thing like a patient's diagnosis may not be specific. Next I felt the old signs, symptoms probably more accurate and more such through them.

George, student,
Shiloh Community College

Box 8.2: Through the Eyes of a Teacher

It was my first assignment with this [I prepared for the assignment I noted that it was a 12 page call and had a history of ongoing heart failure. When I received the 12 responses, he seemed breathless and he was having some difficulty in breathing. He seemed to be tired even though this was a morning assignment. I noticed the blood color so that he could not write. Just the third paragraph down it was in a vague position. [I] seemed to have some difficulty breathing and he asked to sit upright again.

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George, student,
Shiloh Community College

◀ **English-to-Spanish Phrase Lists**

384. INTERVIEW ASSIGNMENT TUTORIALS: A STEP-BY-STEP GUIDE FOR THE DENTAL HYGIENIST TABLE 5.2: English to Spanish Phrase List for Blood Pressure Assessment	
How are you feeling today?	¿Cómo se siente hoy?
Do you smoke?	¿Usa fumar?
How many times have I been once you smoked a cigarette, cigarette, or pipe?	¿Cuántas veces he pasado desde la última vez que fumaste?
Did you drink coffee or alcohol before coming here today?	¿Ha tomado café o alcohol antes de venir hoy?
About how long ago was that?	¿Hace cuánto tiempo?
Have you been exercising?	¿Usaba ha estado haciendo ejercicio?
I am going to take your blood pressure.	Voy a tomar su presión.
Your blood pressure is a clue to the health of your heart and blood vessels.	La presión es una indicación de el estado de su corazón y vasos.
Have you had your blood pressure taken before?	¿Lo han tomado la presión antes?
I am going to pump up into this cuff to take your blood pressure.	Yo voy ha bombear aire adentro de este <u>codo</u> de presión, y de aquí medirá su presión. En no momento después ha dejar que el aire se escape de el codo, y usted sentirá como cómodo.
Do you have any questions?	¿Usa tiene alguna pregunta?
Would you please roll up your sleeve?	Por favor vuélva su manga.
Please turn your arm over with the palm facing up.	Por favor gire su brazo con la palma cara arriba.
Just relax; this will only take a few minutes.	¡Tranquilizate! Esto tomará solamente unos minutos.
Please remain still and do not talk while I take your blood pressure.	Por favor quédese quieta mientras tomo su presión.
Just relax your arm and hand, let me support your arm for you.	Relaje su brazo y mano, y déjame soportar su brazo.

(continued)

Practical Focus Cases

Case studies present you with a clinical scenario. Questions at the end of these sections require you to think critically about the situation and apply the information you have learned. ►



MODULE 4 VITAL SIGNS, PULSE AND RESPIRATION	245
SECTION 5 QUICK QUESTIONS	
1. The pulse rate is an indication of a person's:	
A. Heart rate	
B. Blood pressure	
C. Respiration	
D. Cholesterol	
2. The main artery of the upper arm is the:	
A. Radial artery	
B. Ulnar artery	
C. Carotid artery	
D. Brachial artery	
3. The radial pulse point is located:	
A. On the wrist, below the little finger	
B. On the thumb side of the wrist	
C. Near the center of the wrist	
D. At the bend in the arm opposite the elbow	
4. The normal pulse rate for an adult ranges from:	
A. 60–100 beats per minute	
B. 75–120 beats per minute	
C. 75–140 beats per minute	
D. 80–120 beats per minute	
5. The respiratory rate of an adult patient is measured by:	
A. Observing the patient's nose	
B. Observing the rising and falling of the chest	
C. Observing the rising and falling of the abdomen	
D. Counting an inspiration and expiration as two respirations	
6. The normal respiratory rate for an adult is:	
A. 22–34 respirations per minute	
B. 16–30 respirations per minute	
C. 12–16 respirations per minute	
D. 14–20 respirations per minute	

Quick Questions

Practice questions at the end of each chapter test your recall of the material covered.

Skill Checks

Assess your understanding and ability to perform the skills presented in the chapter. Skill Checks can be removed from the text and given to your instructor as proof of skill competency. ►

MODULE 4 VITAL SIGNS, PULSE AND RESPIRATION	247
SECTION 6 SKILL CHECK	
TECHNIQUE SKILL CHECKLIST PULSE AND RESPIRATION	
Student:	
Evaluator:	
Date:	
DIRECTIONS FOR STUDENT: Use Column B, evaluate your skill level as S (satisfactory) or U (unsatisfactory).	
DIRECTIONS FOR EVALUATOR: Use Column E.	
Indicate S (satisfactory) or U (unsatisfactory). Each S equals 1 point, each U equals 0 points.	
Criteria	S U
Positions the patient with the arm resting comfortably on the armrest or other support.	
Prepares the patient. Grasps the patient's wrist with the fingers of the free (non-watch-bearing) hand.	
Using the finger pads, locates the radial pulse point on the thumb side of the patient's wrist. Applies only enough pressure so that the radial artery can be distinctly felt.	
Notes whether the pulse is regular or irregular.	
Using a watch with a second hand, counts the beats for a minimum of 30 seconds if the pulse is regular. Counts the pulse for 1 minute if the pulse is irregular. Calculates the pulse rate.	
Plots a mental note of the pulse rate and without letting go of the patient's wrist, begins to observe the patient's breathing. Does not inform the patient that the respirations are being assessed.	
When one complete cycle of inspiration and expiration has been observed, looks at watch to determine the respiratory rate. Counts the number of breaths for a minimum of 30 seconds. If breathing is abnormal in any way, counts the respirations for 1 minute. Calculates the respiratory rate.	
Records weight, date, time, and the pulse and respiratory rates in the patient chart or computer record.	
Reports pulse rate within 2 beats of the evaluator's rate.	
Reports respiratory rate within 2 breaths of the evaluator's rate.	
OPTIONAL GRADE PERCENTAGE CALCULATION	
Total "S"s in each 1 column.	
Sum of "S"s divided by Total Points Possible (10) equals the Percentage Grade.	

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Jill S. Nield-Gehrig

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PART 3: COMPREHENSIVE PATIENT CASES

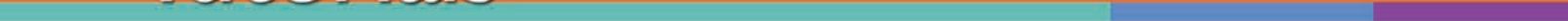
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MODULE 1

Communication Skills for Assessment

MODULE OVERVIEW

Clear communication provides the foundation for the patient assessment procedures from history taking to explaining assessment findings to the patient. Being able to effectively communicate—or participate in the exchange of information—is an essential skill for dental health care providers.

To a great extent, the patient's satisfaction with dental care is determined by the dental health care provider's ability and willingness to communicate and empathize with patient needs and expectations. Good communication during the assessment process sets the tone for quality care and loyal patients.

This module summarizes techniques for—as well as obstacles to—effective communication during the patient assessment process.

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SKILL GOALS

- Define communication and describe the communication process.
- Describe how ineffective communication hinders the provision of quality dental care.
- Describe the two major forms of communication and give examples of each.
- Discuss techniques that promote effective communication.
- Understand the role of effective communication in the provision of quality dental care.
- List and describe three ways in which people communicate nonverbally.
- Explain why appearance can often lead to incorrect assumptions about an individual.
- Define patient-centered care.
- List and describe five key elements of the RESPECT model for the patient-centered approach to communication.
- Discuss strategies for making health care words understandable to the patient.
- Demonstrate the use of communication strategies and questioning techniques that facilitate complete, accurate information gathering during patient assessment.

SECTION 1 THE COMMUNICATION PROCESS

WHAT IS COMMUNICATION?

Communication is the exchange of information between individuals. The word “exchange” is essential to understanding the act of communicating. The process of communication is an *exchange of information* that moves back and forth between two people. A dental health care provider must be a successful communicator, both as a sender and receiver of information. Communication with a patient involves not only telling the person something (sending information) but also is about listening to the patient’s response—receiving information—in return. The understanding of how to convey and interpret meaning is essential for effective communication. In the context of dental care, communication’s primary function is to establish understanding between the patient and dental health care provider.

Ineffective Communication

There are always at least two parties involved in any communication. Communication blocks can occur when the clinician assumes that the patient knows what he or she is thinking (Fig. 1-1). (The patient **should know** that the health history is important, **shouldn’t he?**)

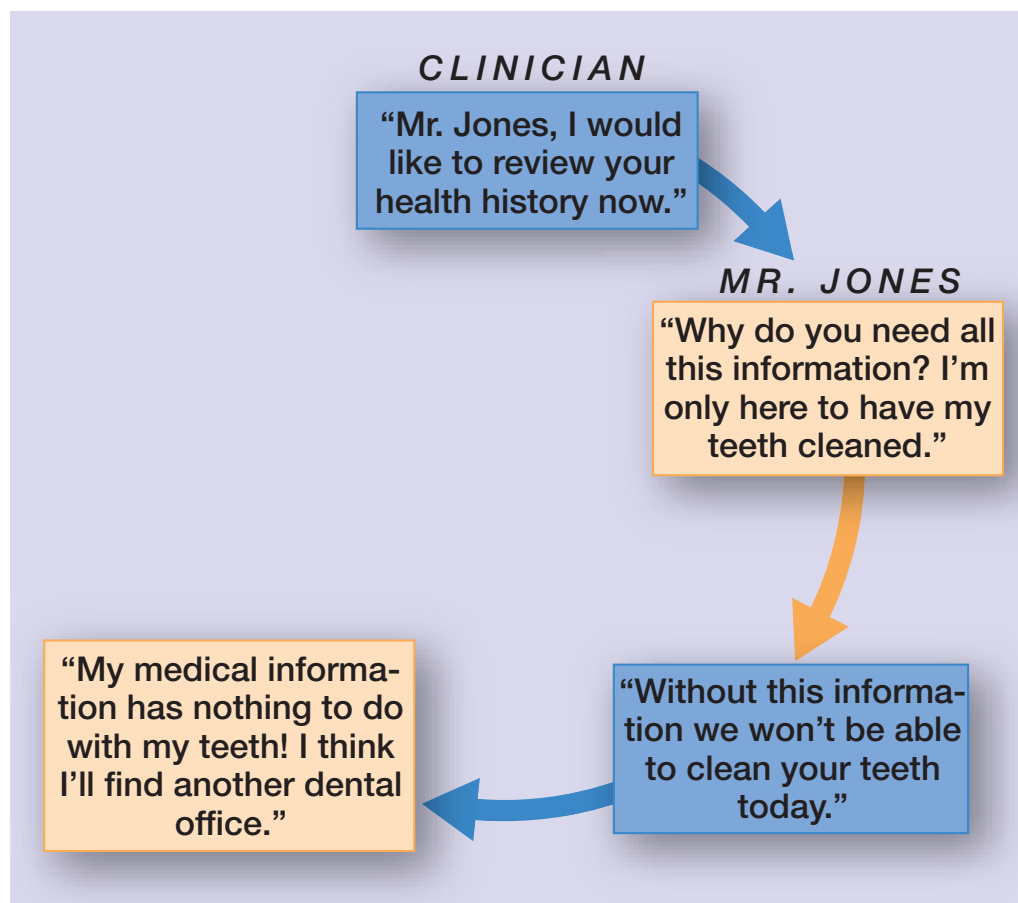


Figure 1-1. Ineffective Flow of Communication. The assumption that the patient knows what the clinician knows—such as why an accurate health history is important—presents a major roadblock to effective communication.

Box I-1. The Impact of Poor Patient Communication**POOR COMMUNICATION:**

- Decreases the patient's confidence and trust in dental care
- Deters the patient from revealing important information
- Leads to the patient not seeking further care
- Leads to misunderstandings
- Leads to the misinterpretation of advice
- Underlies most patient complaints

These difficulties may lead to poor or suboptimal dental health for the patient.

Effective Communication

Being a good listener is key to interacting and responding to the patient in a manner that conveys empathy for, as well as interest in, his or her concerns. A successful communication begins by recognizing the patient's needs and concerns (Fig. 1-2).

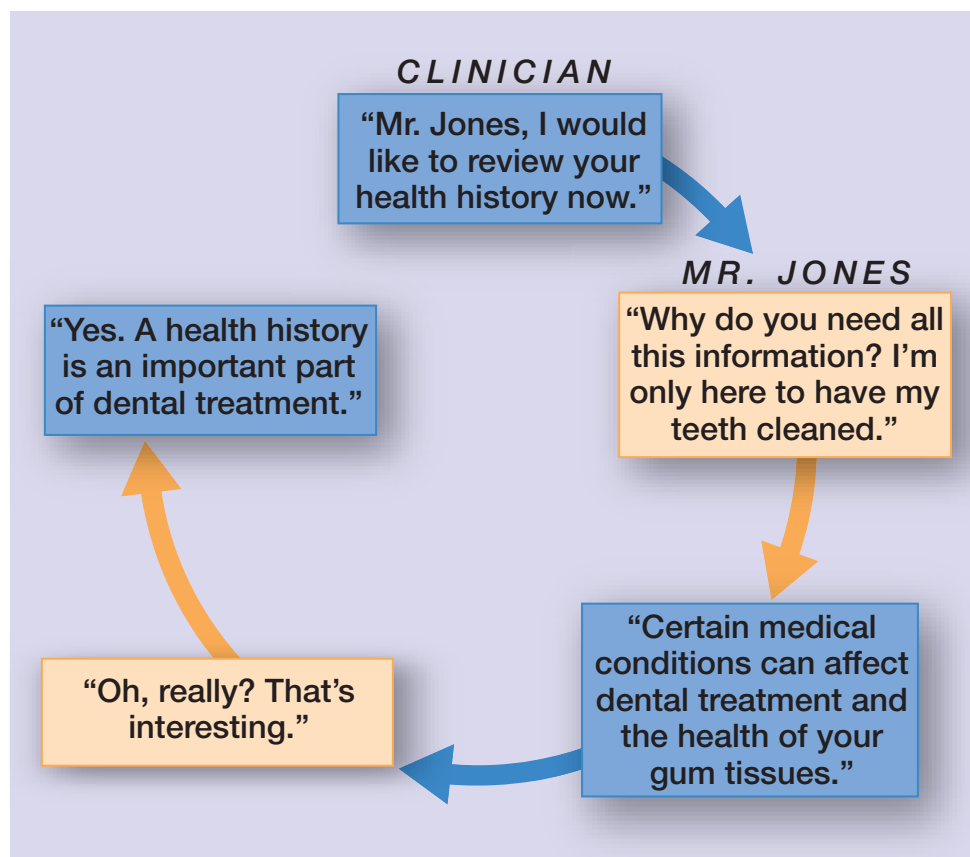


Figure 1-2. Effective Flow of Communication. Communication is most effective when the clinician uses words that the patient will understand and listens carefully to the patient's responses or questions.

Box 1-2. The Benefits of Good Patient Communication

GOOD COMMUNICATION:

- Builds trust between the patient and health care provider
- May make it easier for the patient to disclose information
- Enhances patient satisfaction
- Allows the patient to participate more fully in health decision making
- Helps the patient to make better dental health decisions
- Leads to more realistic patient expectations

The benefits of good communication may contribute to better dental health for the patient.

Communication Filters

Each person involved in the act of communication interprets a message based on many factors, such as his or her life experiences, age, gender, and cultural diversity. These factors act as **personal filters** that “distort” messages being sent and received (Fig. 1-3).

For this reason, the message received may not be the message sent. Normal human biases or personalized filters create major barriers to effective communication.

Communication is promoted by awareness that human beings have personalized filters that can impede accurate communication. Means of encouraging accurate communication include using a vocabulary that is easily understood by patients combined with an awareness of physical limitations, life experiences, and cultural differences.

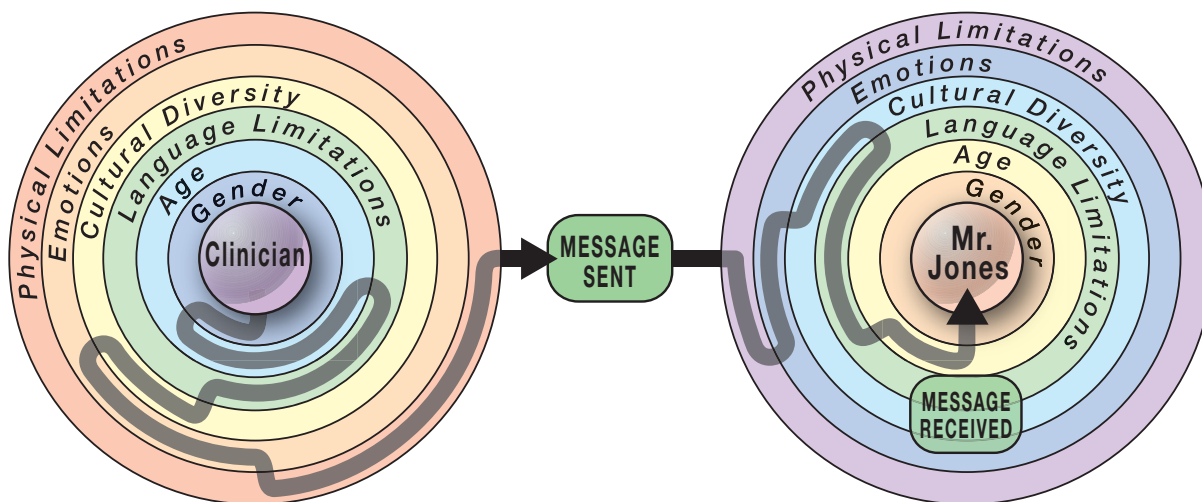


Figure 1-3. Personal Filters. Each individual interprets a messages based on his or her own filters, such as life experiences, beliefs, physical limitations (e.g., hearing loss), and gender.

NONVERBAL COMMUNICATION

There are two major forms of communication: verbal and nonverbal. [1] Dr. Albert Mehrabian, who pioneered the study of communication, found that only about 7% of the meaning of a message is communicated through verbal exchange (Fig. 1-4). About 38% is communicated by the use of the voice and tone. About 55% comes through gestures, facial expression, posture, etc. Dr. Mehrabian's communication model is useful in illustrating the importance of considering factors other than words when trying to convey meaning (as the speaker) or interpret meaning (as the listener). The understanding of how to convey and interpret meaning is essential for effective communication.

1. **Verbal communication** is the use of spoken, written, or sign language to exchange information between individuals. In the context of dental care, communication's primary function is to establish understanding between the patient and clinician.
2. **Nonverbal communication** is the transfer of information between persons without using spoken, written, or sign language.
 - In nonverbal communication “wordless” messages are sent and received by means of facial expression, appearance, gaze, gestures, posture, tone of voice, hairstyle, grooming habits, and body positioning in space.
 - Each of us gives and responds to literally thousands of nonverbal messages daily in our personal and professional lives.
 - We all react to wordless nonverbal messages emotionally, often without consciously knowing why.

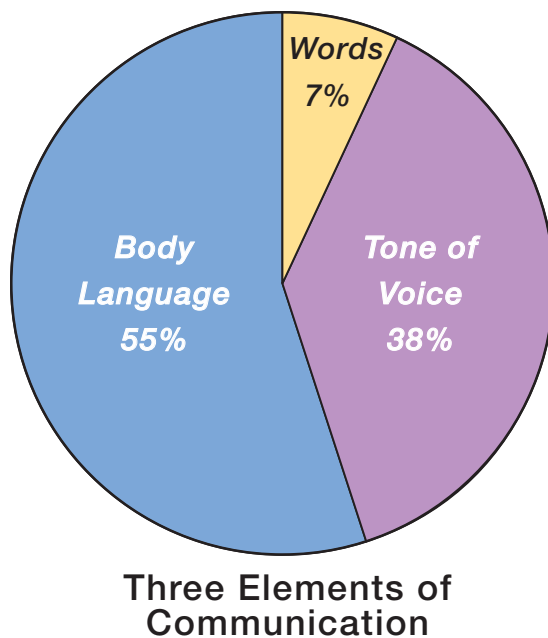


Figure 1-4. Nonverbal Communication. Nonverbal communication is information that is communicated without using words.

- 7% of meaning is in spoken words
- 38% of meaning is paralinguistic (the way that words are said)
- 55% of meaning is in body language, such as facial expression

Box 1-3. Nonverbal Communication

Nonverbal communication can include: posture, facial expression, appearance, hairstyle, clothes, shaking hands, smiling, proximity to others, touch, color choice, and silence.

First Impressions

1. **Unconscious First Impressions.** Health care providers prefer to be judged on their knowledge, skills, and the care they provide to patients.
 - It seems unfair, but first impressions count (Fig. 1-5).
 - When a person walks into a room, others make subconscious decisions about him or her. Within about 60 seconds, others have judged the person's educational background, likability, and level of success.
 - After about 5 minutes, conclusions have been drawn about the person's trustworthiness, reliability, intelligence, and friendliness.
 - Impressions are based upon instinct and emotion, not on rational thought or careful investigation.
 - We all make associations between outward characteristics and the inner qualities we believe they reflect.
 - We filter everything we see and hear through our own experiences. We all have assumptions—**stereotypes**—regarding what it means to be short or tall, heavy or thin, clean or dirty, native or foreign, young or old, male or female.
2. **Creating Positive First Impressions.** What can health care providers do to be in control of a patient's first impression of us?
 - Each clinician has to determine his or her objectives and make choices in dress and behavior that convey competence and caring.
 - First impressions can open the lines of communication and build trust.



CLINICIAN A



CLINICIAN B

Figure 1-5A and 1-5B. First Impressions. If you were a patient, what message would these two clinicians send to you?

Use of Space

1. **Proxemics** is the study of the distance an individual maintains from other persons and how this separation relates to environmental and cultural factors.
 - Every person has around him or her an invisible “personal zone of comfort” defined as personal space. We have all felt uneasiness in an elevator or airplane when the stranger on either side inadvertently touches us.
 - Our personal zone of comfort has been invaded and we feel uncomfortable and resentful. **Personal space**—or distance from other persons—is a powerful concept that we use in determining the meaning of messages conveyed by another person.
 - For example, an angry person is perceived as less threatening if the person is not standing nearby. If an angry person is close, however, the individual’s anger is perceived as more threatening.
 - Personal space is a subtle but powerful part of nonverbal communication that health care providers must understand in order to relate better to the patient in the dental setting.
 - Entering the personal or intimate zones of comfort is necessary in the dental health care setting and, if not carefully handled, may cause the patient to feel threatened or insecure.

TABLE I-1. Personal Space

Territorial Zone	Body Space
Intimate	1 to 18 inches
Personal	1.5 to 4 feet
Social	4 to 12 feet
Public	More than 12 feet

2. **Territory** is the space we consider as belonging to us.
 - The way that people handle space is largely determined by their culture.
 - Differences in culture can lead to different interpretations of personal space and touching.
 - North Americans and Latin Americans, for example, have fundamentally different proxemic systems.
 - While North Americans usually remain at a distance from one another, Latin Americans stay very close to each other.
 - Remland and colleagues [2] reported that in their sample of seven nations, the British sample showed on average the greatest distance between persons in a conversation (15.40 inches). Southern European countries, such as Greece (13.86 inches) and Italy (14.18 inches) showed a closer distance between persons engaged in conversation.
 - **Low-contact cultures** (North American, Northern European, Asian) favor the Social Zone for interaction and little, if any, physical contact.
 - **High-contact cultures** (Mediterranean, Arab, Latin) prefer the Intimate and Personal Zones and much contact between people. In Saudi Arabia, persons engaged in conversation might be almost nose-to-nose with each other because their social space equates to a North American’s intimate space.
 - Misunderstandings can occur when low-contact cultures interact with high-contact cultures and either invade or avoid personal space and physical contact.

Box 1-4. Low-Contact vs. High-Contact Cultures

LOW-CONTACT CULTURES

Asian: China, Indonesia, Japan, Philippines, Thailand

Southern Asian: India and Pakistan

Northern European: Australia, England, Germany, the Netherlands, Norway, Scotland

North American: United States and Canada

HIGH-CONTACT CULTURES

Arab: Iraq, Kuwait, Saudi Arabia, Syria, United Arab Republic

Latin American: Bolivia, Cuba, Ecuador, El Salvador, Mexico, Paraguay, Peru, Puerto Rico, Venezuela

Southern European: France, Italy, Turkey

Touch as Nonverbal Communication

1. **The Importance of Touch.** Touching is perhaps the most powerful nonverbal communication tool.
 - We can communicate a wide variety of emotions through touching, such as support, protection, anger, tenderness, or intimacy.
 - Touch is culturally determined. Each culture has a clear concept of what parts of the body one may not touch. Low-contact cultures—English, German, Scandinavian, Chinese, and Japanese—have little public touch. High-contact cultures—Latino, Middle-Eastern, and Jewish—accept frequent touches.
2. **Touch Is Universal.** Touch is perhaps the most universal of all forms of communication.
 - The comforting aspect of touch is significant in health care.
 - A comforting touch can say more than words (Fig. 1-6). A light pat on the shoulder or on the top of the hand is comforting and establishes a bond between the health care provider and patient.
3. **Touch Taxonomy.** Richard Heslin has developed a taxonomy that classifies touch (Box 1-5).
 - Heslin's five categories are: functional/professional, social/polite, friendship/warmth, love/intimacy, and sexual arousal. [3]
 - *Dental care involves being in close proximity to the patient—invading the patient's space—and touching the patient.*
 - A patient may be acutely aware of the clinician's touch and some patients may question the appropriateness of touching.
 - Dental health care providers should recognize that the patient is entitled to know why and where he or she is to be touched.
 - Clinicians should respect, as much as possible, the patient's personal space.

Box I-5. Heslin's Categories of Touching Behavior

1. Functional/professional
2. Social/polite
3. Friendship/warmth
4. Love/intimacy
5. Sexual arousal



Figure I-6. The Value of Touch. Of the many techniques for enhancing communication, nothing says “I care about you and I want to help you” more effectively than a simple touch on a person’s hand or shoulder.

SECTION 2 COMMUNICATING WITH PATIENTS

PATIENT-CENTERED COMMUNICATION

Effective communication involves **patient-centered care**—respecting the patient as a whole, unique individual. A patient-centered approach to patient care recognizes that there are two experts present during the interaction between a health care provider and patient. One expert is the health care provider who has clinical knowledge. The second expert is the patient who brings experience, beliefs, and values to the dental treatment planning process. Both have rights and needs, and both have a role in decision making about care and implementation of treatment.

The RESPECT Model

The RESPECT model (Box 1-6) summarizes the patient-centered approach to communication. [4]

Box 1-6. The RESPECT Model for Patient-Centered Communication

RAPPORT

- Connect with a patient on a social level
- See the patient's point of view
- Consciously suspend judgment
- Recognize and avoid making assumptions

EMPATHY

- Remember that the patient has come to you for help
- Seek out and understand the patient's rationale for his or her behaviors or disease
- Verbally acknowledge and legitimize the patient's feelings

SUPPORT

- Ask about and understand the barriers to care and compliance
- Help the patient overcome barriers
- Involve family members if appropriate
- Reassure the patient you are and will be available to help

PARTNERSHIP

- Allow the patient to be an equal partner in the decision-making process
- Stress that you are working together to address dental problems

EXPLANATIONS

- Check often for understanding
- Use verbal clarification techniques

CULTURAL COMPETENCE

- Respect the patient's cultural beliefs
- Understand that the patient's interaction with you may be defined by ethnic or cultural stereotypes
- Be aware of your own cultural biases and preconceptions

TRUST

- Recognize that self-disclosure may be difficult for some patients
- Consciously work to establish trust

Box I-7. Collaborating with Patients

- Acknowledge that for care to be effective, the patient and clinician must work together.
- Treat every patient as though he or she is the only expert on the problem—you are only a collaborator in producing solutions and/or providing advice regarding the problem.
- Interact with the patient as a peer; avoid a condescending approach.
- Fully inform the patient about treatment options and outcomes.
- Elicit the patient's opinion of the proposed treatment.
- Try to understand the patient's perspective.
- Avoid being defensive; state information clearly without a confrontational tone.
- Understand and respect patients' values, beliefs, and expectations.

Skills for Establishing Rapport

In a dental setting, as in most other human interactions, first impressions count. Meeting and greeting a patient is the first step in the dental care process.

1. Get the Appointment off to a Good Start

- Review the chart before greeting the patient.
- Have an open, friendly expression; smile.
- Greet an adult patient by last name and title (Mr., Mrs., Ms., Dr., etc.). Greet anyone accompanying the patient in a similar manner. Do not address the patient by his or her first name unless asked to. Ask how to pronounce unfamiliar names.
- Introduce yourself. Escort the patient to the treatment room.
- Use touch sparingly. Many people are not comfortable with strangers hugging, patting, or touching them.

2. Monitor Your Body Language

- Sit facing the patient at eye level. Make eye contact; look directly at the patient. An exception to this suggestion occurs when the patient's culture may view direct eye contact as inappropriate. Koreans, Filipinos, certain Asian cultures, and Native Americans may find direct eye contact offensive. [5] Be guided by the patient's behavior; if he or she avoids eye contact, do likewise.
- Maintain an appropriate distance from the patient.
- Be aware of your own nonverbal behaviors. For example, glancing at your watch might convey that you are rushed. Use reassuring gestures, such as nodding your head, to encourage the patient to keep talking.
- Be alert for nonverbal clues that indicate the patient is uncomfortable or anxious. Some of these are fidgeting, rapid breathing, shakiness of hands, eyes wandering around the treatment room, or actual wringing of hands.

LISTENING SKILLS

The most effective dental health care providers are those who have developed good listening skills. When gathering information from the patient, not only is it important to know the right questions to ask, but it is equally valuable to listen carefully to the patient's answers. The patient is the only person who knows the events of his or her life—such as medical conditions—and his or her expectations for dental care. Listed below are suggestions for becoming a better listener.

1. General Tips for Attentive Listening

- Pay attention to what is being said; do not worry about what you are going to say next. Avoid interrupting the patient. Focus on the patient who is telling you something that is important to him or her.
- Use facial expressions and body language to confirm that you are listening to what the patient is saying. Make eye contact, lean forward, and nod your head at key points.
- Be alert for language barriers. For example, does the patient speak and understand English? Can the patient hear you?
- Respect each patient as an individual, taking care not to jump to assumptions about the patient.

2. Reflective Listening

Reflection—or repeating something the patient has just said—can help the clinician to obtain more specific information. Reflection is a way of indicating that you are listening.

- Repeat a key point of the patient's statement.

Patient: *I get a sharp pain in this tooth.*

Clinician: *The pain is sharp.*

Patient: *Yes, I frequently feel a very sharp pain when chewing something hard.*

- Offer confirmation that you hear what is being said. An “um-hmm,” “go on,” or “I see” may be all that is required.

3. Empathic Listening

Be aware that patients are often anxious or concerned. Respond to patient concerns with genuine sympathy and support.

- Reflect on what you think the patient is feeling.

You seem concerned.

Most patients are anxious before having a root canal.

Flossing is frustrating for you.

- Restate a question or summarize a statement.

You don't think that these x-rays are needed.

- Encourage the patient to talk about concerns rather than dismissing them.

Are you concerned that x-rays are not safe?

4. Clarify and Confirm Information

Clarify patient responses to questions. Restate what you heard using your own words and ask if your interpretation is correct. Use confirmation to ensure that the clinician and patient are both on the same track and to clear up misconceptions.

- Summarize what you heard the patient say.

Clinician: *If I understand you correctly, you said. . .*

- Clarify information. Ask a question, if you want to clarify the patient's statement.

Patient: *This is too much for me to handle.*

Clinician: *What is it that you cannot handle?* (Clinician gives the patient an opportunity to explain the statement.)

- Rephrase the statement to clarify what the patient is saying.
Patient: I am worried that this is very serious.
Clinician: So, are you worried that you might lose that molar tooth?

QUESTIONING SKILLS

Questioning skills are particularly important during the health history portion of the assessment process to gather complete and accurate information from the patient. Techniques are summarized in Box 1-8.

Box 1-8. Tips for Effective Questioning

1. General Tips for Gathering Information

- Use language that is understandable to the patient. Avoid medical/dental terminology if the patient does not have a medical or dental background. Most people have difficulty understanding the words used in health care. For example, rather than asking if the patient has ever experienced vertigo, ask if he or she felt dizzy.
- Ask one question at a time. Keep questions brief and simple and give the patient plenty of time to answer.
- Avoid leading questions. Avoid putting words in the patient's mouth.
- Avoid interrupting the patient. If you need to ask a follow-up question, wait until the patient has completed his thought. Let the patient do the talking.
- All questions should be asked in a positive way. Avoid accusing language in your questions (e.g., Why don't you floss every day?)

2. Use of Closed Questions

Closed questions can be answered with a yes or no or a one- or two-word response and do not provide an opportunity for the patient to elaborate. Closed questions limit the development of rapport between the clinician and the patient. Use closed questions to obtain facts and zero in on specific information. Examples of closed questions include:

- *Are you allergic to latex?*
- *How frequent are your seizures?*
- *Did you check your blood sugar levels this morning?*

3. Use of Open-Ended Questions

Open-ended questions require more than a one-word response and allow the patient to express ideas, feelings, and opinions. This type of questioning helps the clinician gather more information than can be obtained with closed questions. Open-ended questions facilitate good clinician–patient rapport because they show that the clinician is interested in what the patient has to say. Examples of such questions include:

- *What happens to you if you are exposed to latex?*
- *What things can trigger your seizures?*
- *What were your blood sugar levels this morning?*

4. Exploring Details with Open-Ended Questions

Focused, open-ended questions define a content area for the response but pose the question in a manner that cannot be answered in a simple word.

- *Please describe the pain that you are feeling.*
- *Please start from the beginning and tell me how this began and how it has progressed.*
- *Which of your family members have diabetes?*

COMMUNICATION TASKS DURING PATIENT ASSESSMENT

When performing assessment procedures, the dental health care provider should remember to communicate with the patient. It is easy for the clinician to concentrate so completely on the steps involved in a procedure that he or she forgets to explain the procedure to the patient or to keep the patient involved in what is happening.

Communication tasks during the patient assessment process include: giving information to the patient, explaining a procedure to the patient, seeking the patient's cooperation, providing encouragement to the patient, reassuring the patient, and giving feedback to the patient. The sample dialogue between a clinician and patient during the blood pressure assessment shown in Box 1-9 demonstrates ways in which communication is helpful during an assessment procedure.

1. Giving Information

Example: *We do this to make sure that your temperature, pulse, respiration, and blood pressure are OK before starting any treatment.* Other ways of phrasing this include:

- *This is. . .*
- *I need to. . .*
- *This is important because. . .*

2. Explaining a Procedure

Example: *I am going to wrap this cuff around your arm and pump some air into it so that I can read your blood pressure.* Other ways of phrasing this include:

- *I just want to. . .*
- *Now I would like to. . .*
- *Now I am going to. . .*

3. Seeking Cooperation from the Patient

Example: *Could you roll up your sleeve?* Other ways of phrasing this include:

- *I would like you to. . .*
- *If you would just. . .*
- *Would you please. . .?*

4. Offering Encouragement

Example: *Yes, that is fine.* Other ways of phrasing this include:

- *That's good.*
- *Well done.*

5. Offering Reassurance

Example: *Do not worry; you will feel the pressure of the cuff only around your arm.* Other ways of phrasing this include:

- *It won't take long.*
- *This might feel a bit strange at first.*
- *You've had this done before, haven't you?*

6. Giving Feedback

Example: *Your readings are quite normal.* Other ways of phrasing this include:

- *Everything is OK.*
- *Your blood pressure is a bit high, so I'll let Dr. King know what your readings are.*

Box 1-9. Sample Dialogue: Communication Tasks During Blood Pressure Assessment

Clinician: Now, Mrs. Tanner, I need to take your blood pressure. We do this to make sure that your blood pressure readings are normal before beginning any dental treatment. [Giving information to the patient]

Patient: Oh...I see. I have been taking blood pressure pills; my doctor says that it is important to keep my blood pressure under control.

Clinician: I am going to wrap this cuff around your arm and pump some air into it so that I can read your blood pressure. [Explaining the procedure to the patient] Could you please roll up your sleeve a bit? [Seeking cooperation from the patient]

Patient: Yes. (Rolls up sleeve.) Is this far enough?

Clinician: Yes, that's just fine. (Attaches the cuff and begins inflating the cuff.) [Giving feedback]

Patient: It feels a bit funny.

Clinician: Yes, it does feel funny, but don't worry. I am almost done pumping up the cuff. Then I will start releasing the air and you will feel less pressure against your arm. [Offering reassurance to the patient]

Patient: Is my blood pressure OK?

Clinician: Yes. It is quite normal. Your readings today are 110 over 70. [Giving feedback to the patient]

THE RIGHT WORDS

Empathy—identifying with the feelings or thoughts of another person—is an essential factor in communicating with patients. Communication between the dental health care provider and the patient is more complicated than a normal conversation. For many patients, being in a dental office is a high stress situation. Pain, worry, and waiting can make a patient anxious or irritable. Many problems can be prevented by keeping patients informed about waiting times, billing or insurance charges, and other office policies that might trigger angry emotions. **Diplomacy** is the art of treating people with tact and genuine concern. Courtesy is based on sensitivity to the needs and feelings of others. As a health care professional, it is important to be aware of what you say and how you say it. Patient complaints about dental care often revolve around a seemingly innocent comment made by a dental team member. The wrong words can affect a patient's perceptions of the care that they receive. Table 1-2 presents some common situations encountered in a dental office and analyzes both effective and ineffective responses.

TABLE 1-2. Finding the Right Words

Ineffective Response	Analysis	Effective Response	Analysis
Situation A. Mrs. Reman is a new patient. The health history form that she filled out in the reception area has many questions left blank and many things are crossed out. <i>Well, I can see that you had trouble filling this out. Here, why don't you start over with a new form?</i>	Dismisses the patient's efforts to fill out the form; she may not understand all the questions and may need help	<i>I know how difficult these forms are to fill out. Let's go over it together.</i>	Acknowledges the effort made by the patient and that the information is difficult to understand; provides assistance
Situation B. You notice Mr. Jones sitting alone in a treatment room. Two days ago, Mr. Jones learned that he has oral cancer. You can tell that he is very upset. <i>Cheer up! I am sure that everything will be OK after you see the oral surgeon.</i>	Insensitivity to the patient's feelings; provides false reassurance; you have no way of knowing the outcome of surgery	<i>I can't even begin to imagine how difficult this must be for you. Please let me know if there is anything that I can do to help.</i>	Demonstrates caring
Situation C. The woman approaching the reception desk is holding her cheek. She says that she is in a lot of pain and would like to see the dentist. <i>You don't have an appointment and there are three patients ahead of you. You will have to wait your turn.</i>	Ignores the patient's pain; punishes her for not making an appointment before she was in pain	<i>I can see you are in pain. Please sit down for a moment and I will get a treatment room ready for you.</i>	Recognizes that a patient in pain should have priority over routine dental care
Situation D. Mr. Daniels has not visited a dental office for many years. It is obvious that he is very nervous. <i>Just relax.</i>	This may seem like a good response, but actually it does nothing to put the patient at ease	<i>Tell me what is worrying you.</i>	Acknowledges the patient's concerns; elicits specific information about what is worrying the patient

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Patient-Centered Care

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SECTION 4 THE HUMAN ELEMENT

Patient assessment procedures provide critical information for planning dental hygiene care. These complex procedures require practice and experience to master and methodical attention to detail to perform.

- Most textbook space, as well as classroom and laboratory time, is devoted to the technical aspects—the steps—that comprise the patient assessment procedures.
- Yet, the non-procedural human element of the assessment process is equally critical to the success of the assessment process.
- The **Human Element** section of each module of this book will reflect the struggles, fears, and triumphs of the students, clinicians, and patients who engage in the assessment process.

Box I-10. Through the Eyes of a Patient

I know that, as a student, you come into clinic today thinking about what you will accomplish during this appointment. Perhaps you wonder if you will remember to do all of the steps and if you will do them correctly. I am sure that you are worried about your clinic requirements and the instructor's comments about your performance today.

As the patient, I, too, come to this appointment with some needs and concerns. I am not simply a 60-year-old woman with bleeding gums who only has 20 teeth in her mouth. I wish that you would take a moment to consider what is important to me. Most of my needs are simple things that you can do each time that I have an appointment:

- 1. Do not keep me waiting.*
- 2. Ask me what I think.*
- 3. Really listen to me.*
- 4. Do not dismiss or ignore my concerns.*
- 5. Talk to me, not at me.*
- 6. Keep me informed about what you are doing.*
- 7. Do not treat me like a clinical requirement; treat me like a person.*
- 8. Do not tell me what I need to do without telling me why it is important and how to do it.*
- 9. Respect my privacy; do not talk about me to your classmates.*
- 10. Remember who I used to be. I was not always a 60-year-old woman; I used to be a young, enthusiastic research chemist.*
- 11. Let me know that you care about me.*

Mrs. G, dental patient,
South Florida Community College

Used with permission and excerpted from a letter to the students of the Dental Hygiene Program, South Florida Community College.

SECTION 5 QUICK QUESTIONS

1. Which of the following best describes the communication process in a dental setting?
 - A. Give information to the patient
 - B. An exchange of information between the patient and the clinician
 - C. Receive information from the patient
 - D. Correct the patient's misconceptions about dental health
2. All of the following can result in INEFFECTIVE communication, EXCEPT:
 - A. Assuming that the other person knows what you know
 - B. Making judgments about a person without getting to know him or her
 - C. Assuming that the other person understands the meaning of your message
 - D. Recognizing the other person's needs and concerns
3. Most patients judge a dental health care provider's competence based on the clinician's knowledge and clinical skills.
 - A. True
 - B. False
4. Proxemics is the study of the distance an individual maintains from others. During chairside dental treatment, the patient and clinician are within each other's _____ zone.
 - A. Intimate
 - B. Personal
 - C. Social
 - D. Public
5. Which of the following territorial zones do most native-born North Americans favor for interaction with individuals who are not family members or close friends?
 - A. Intimate
 - B. Personal
 - C. Social
 - D. Public
6. When employing a patient-centered care, who is the expert that determines what dental care a patient needs?
 - A. The American Dental Association
 - B. The dental health care provider
 - C. The patient
 - D. The patient and the dental health care provider

7. “*If I understand you correctly, you said. . .*” is an example of which listening skill?
- A. Clarifying and confirming information
 - B. Collaborative listening
 - C. Empathic listening
 - D. Reflective listening
8. Which of the following is an open-ended question?
- A. Are you epileptic?
 - B. What things are you allergic to?
 - C. Did you take your medications this morning?
 - D. When was your last migraine?

NOTE TO THE COURSE INSTRUCTOR ABOUT THE SKILL CHECK PAGES

The Skill Check pages in the book are designed so that the forms can be removed from the book without loss of text content. They can be torn out and used for role-plays and exercises. If desired, they can be collected and retained for course grade determination.

SECTION 6 SKILL CHECK

SKILL CHECKLIST

COMMUNICATIONS ROLE-PLAY

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of the patient.
- Student 2 = Plays the role of the clinician.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play. Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Uses appropriate nonverbal behavior such as maintaining eye contact, sitting at the same level as the patient, nodding head when listening to patient, etc.		
Interacts with the patient as a peer, avoids a condescending approach. Collaborates with the patient and provides advice.		
Communicates using common, everyday words. Avoids dental terminology.		
Listens attentively to the patient's comments. Respects the patient's point of view.		
Listens attentively to the patient's questions. Encourages patient questions. Clarifies for understanding, when necessary.		
Answers the patient's questions fully and accurately.		
Checks for understanding by the patient. Clarifies information.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (7) equals the Percentage Grade _____		

NOTES

NOTES

MODULE 2

Making Our Words Understandable

MODULE OVERVIEW

Clear communication provides the foundation for the patient assessment procedures, yet many people—even highly educated people—have trouble understanding words used in health care.

This module explores strategies that dental health care providers can employ to help patients understand dental health information and advice.

MODULE OUTLINE

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	Medical and Dental Terminology	
	Reading Ability	
SECTION 2	Making Health Care Words Understandable	30
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SKILL GOALS

- Discuss strategies for making health care words understandable to the patient.
- Demonstrate the ability to gather relevant information from the Internet.

SECTION 1 ROADBLOCKS TO EFFECTIVE COMMUNICATION

MEDICAL AND DENTAL TERMINOLOGY

1. **Unfamiliar Words.** **Health literacy** is the ability of an individual to understand and act on health information and advice. Because health information can be complex and scientific, people often have difficulty reading and understanding written materials such as informational brochures about dental problems and treatments, medical history forms, consent forms, and directions on medication labels.
2. **Words in a New Context.** In other cases, a word may be familiar, but the person may not understand it in a health care context.
 - For example, “*You have a 6mm deep pocket around this molar tooth,*” might have no meaning to a patient. The patient might know what the words “*deep*” and “*pocket*” mean in everyday speech, but have no idea what these words mean in terms of dental health.
 - Even a patient who understands these dental terms may need more information than this sentence provides. He or she may need to know what constitutes normal bone support for the teeth.
3. **Embarrassment.** Many patients, because they are embarrassed or intimidated, do not ask health care providers to explain difficult or complicated information. If patients do not understand treatment or self-care instructions, a crucial part of their dental care is missing, which may have an adverse effect on their dental health.

READING ABILITY

Reading ability can present another roadblock to effective communication.

1. **Reading Ability Correlates to Health Status.** According to a report published in the *Journal of the American Medical Association*, the ability to read is a stronger indication of health status than other variables, including race, age, and educational level. [1]
2. **Reading at Eighth to Ninth Grade Level.**
 - One out of five American adults reads at the fifth grade level or below.
 - The average American reads at the eighth to ninth grade level, yet most health care materials are written about the tenth grade level. [2]
3. **Stigma of Illiteracy.**
 - There is a strong stigma attached to reading problems, and nearly all nonreaders or poor readers try to conceal the fact that they have trouble reading. [3]
 - Many people with poor reading skills have developed coping skills that allow them to maneuver in the health care system with the least amount of embarrassment.
 - Box 2-1 lists some clues that indicate that the patient may need additional help.

Box 2-1. Clues that a Patient May Have Reading Problems

- Registration, health history, or other forms filled out incompletely or incorrectly
- Written materials handed to a relative or other person accompanying the patient
- “Can you help me fill out this form, I forgot my glasses?”
- “I will take this with me and read it at home.”
- “I can’t read this now; I forgot my glasses.”

SECTION 2 MAKING HEALTH CARE WORDS UNDERSTANDABLE

Many people have trouble understanding words used in health care. Dental health care providers should strive to use plain everyday language instead of technical language or dental terminology when speaking with patients. Table 2-1 provides a list of words that may be confusing to patients and suggestions for common words and phrases that can make health care information more understandable.

TABLE 2-1. Words to Watch *

	Problem Word:	Consider Using:
A	Abscess	A collection of pus that has collected in a small area
	Active role	Taking part in
	Adequate	Enough
	Adjust	Fine-tune; change
	Adolescents	Teenagers
	Adverse (reaction)	Bad
	Advisable	Wise; makes sense
	Alveolar bone	Bone around the teeth
	Angina	Chest pain
	Anti-inflammatory	Reduces swelling and fever
	Anxiety	Very worried; very nervous
	Area	Part; place
	Arteries	Blood vessels
	As recommended	As you were told by the dental care provider
	Avoid	Stay away from
B	Behavior	How a person is acting; actions
	Benefit	Do good for, help
	Benign	Will not cause harm; is not cancer
	Biofilm	Layer of bacteria attached to the teeth
	Bleeding on probing	Bleeding from the gum tissue
	Blood pressure	Pressure of blood on the wall of blood vessels
	Bloodstream	Blood
	Borderline	On the edge of, on the line between
	Calculus	Hard deposits; tartar
	Cardiovascular	Heart and blood vessels
C	Chronic	Had for a long time, constant
	Collaborate	Work together
	Communicate	Talk with, write to
	Concerned	Worried about
	Confidential	Private, keep private

(continued)

D	Contagious	A disease that can be passed on
	Contribute	Play a part in, adds to, is a part of
	Definitely	For sure
	Desirable	Wanted, needed, best
	Determine	Find out, agree on
	Develop	Get, have
	Diagnose	Find the cause of your dental problem
	Diagnosis	Cause of problem
	Diet	What you eat; your meals
	Difficult	Very hard
	Discomfort	Pain, soreness
	Discuss	Talk with
	Disorder	Dental problem, disease, illness
	Dizziness	Feel dizzy
	Drug interaction	How one drug acts with another
E	Edema	Swelling, swollen
	Enlarge	Get bigger
	Ensure	Make sure, make certain
	Especially	Likely
	Estimated	Nearly, about, around
	Excessive	Too much; e.g., <i>(bleeding)</i> ; <i>if blood soaks through the gauze</i>
F	Exhibit	Show
	Factor	Other thing
	Frequently	Often
G	Generalized	Most areas, widespread
	Gingiva	Gum tissue, tissue that surrounds the teeth
	Gingivitis	Gum disease, infection of the gum tissues
H	Hazardous	Dangerous, not safe
	Health status	How healthy
	Hives	Red, itchy bumps
I	Identify	Find out
	Imbalance	Out of balance
	Immediate	At once, right away
	Improve	Get better
	Indicated	Used for
	Individual	Person
	Inflammation	Swelling, redness, heat, and pain in an area; reaction to infection or injury
	Infection	A disease caused by germs

(continued)

	Informed	Told
	Informed decision	Make the best choice for you, know what you are choosing, have the best information before choosing
	Infrequent	Not often, few and far between
	Initial	At first, first
	Interaction	How things work together (drug interaction)
	Interproximal	Between the teeth
	Interfere	Get in the way of, block, hold up
	Intermittent	On and off
J	Jaundice	Yellowing of the skin or whites of the eyes
L	Lesion	Wound, sore, infected patch of skin
	Life-threatening	Life and death, dangerous
	Localized	Limited to a small area, found in a small area
M	Medical condition	Illness, medical problem, disease
	Medication	Medicine, drug
	Mg (milligram)	Very small amount used to measure drugs
	Moderately	Not too much
	Monitor	Keep track of
	Motivated	To want to do something
N	Nausea	Upset stomach
	Necessary	Needed
	Necrotic	Dead tissue
	Neglect	Lack of care, do not care for
	Noncancerous	Not cancer
	Non-prescription	You can buy without a prescription, you can buy off the shelf
	Normal	Common, standard, usual, healthy
	Normal range	Where it should be, common amount
	Nutrient	Something in food that is good for you
O	Occlude	Bite your teeth together, put your back teeth together
	Occur	Happen
	Option	Choice
	Over-the-counter	You can buy without a prescription, you can buy off the shelf
P	Perform	Do
	Periodontal disease	Infection of the tissue and bone surrounding the teeth; bone loss
	Permanent	Lasting, forever
	Persistent	Lasting, constant
	Pharmacy	Drug store
	Plaque	Layer of bacteria attached to the teeth
	Pocket	Space between the tooth root and the gum tissue caused by loss of bone support from around the tooth

(continued)

	Prevalent	Common, happens often
	Prioritize	Put first things first; put most important things first
	Procedure	Something done to treat a problem
	Progressive	Gets worse (progressive bone loss)
	Pros and cons	Reasons for and against
	Prosthesis	Replacement for a body part
	Provide	Give
R	Reaction	Result, response
	Recommend	Suggest
	Recreational drug	Street drug
	Reduce	Lower
	Referral	Ask that you see a physician (doctor) or another dentist
	Refrain	Stop; stay away from
	Regularly	Every month, every week, every day
	Related to	Has to do with something
	Relieve	Lessen, help, ease
	Repeatedly	Often, over and over
	Request	Ask for
	Resources	Organizations, information that can help you
	Respond	Take action; improve
	Risk factor	Will increase your chance of getting
	Routinely	Often
S	Severe	Serious, dangerous
	Side effect	Something caused by a medicine you take
	Significantly	Enough to make a difference
	Similar	Same as, like
	Sulcus	Space between the gum tissue and the tooth
	Symptoms	Signs, warning signs
	Syncope	Blackout, fainting
	Syndrome	A pattern of things that can happen, disease
T	Tablets	Pills
	Temporary	For a short time
	Treatable	Can be treated
	Treatment plan	Treatment
U	Unable	Cannot
	Uncontrollable	Cannot be controlled
	Unexpected	Did not expect
V	Unique	Special
	Visible	Can be seen
W	Wellness	Good health

* Used with permission from Partnership for Clear Health Communication at the National Patient Safety Foundation.

SECTION 3 INFORMATION GATHERING ON THE INTERNET

Peak Procedure 2-1. Procedure for Searching the Internet

EQUIPMENT

Computer with Web browser software

A modem to connect to the Internet

An active Internet connection

STEPS

PURPOSE

- | | |
|--|--|
| 1. Connect a computer to the Internet and open an Internet browser. Some of the most popular browsers are Internet Explorer, Safari, Firefox, and Netscape. | The Internet browser is a software program used for searching and viewing various kinds of Internet resources such as information on a website. |
| 2. Locate a search engine. Most browsers have a built-in search engine. Popular search engines include Google, Lycos, AltaVista, Yahoo, and Excite. | The Internet has millions of pages of information. Search engines help you sift through all those pages to find the information that you need. |
| 3. Look at the search engine's Web page. Near the top of the page you will see a white box with the word SEARCH next to it. Click the search box and type a word or phrase that describes what you are looking for. Next, press the GO button next to the search box or hit the Return key on your keyboard. | The words that you type in the search box are called "key words." Key words tell the search engine what to look for. For best results, it is important to choose the key words carefully. Use one to three words that are as specific as possible. |
| 4. View the results of your search. If you did not find what you are looking for, check spelling and retype or choose new key words and try the search again. | If the key words are misspelled or not specific enough, the search engine will not find the information that you need. |
| 5. From the search results page, select an appropriate site and double click the address written in blue to open the website. | This allows you to view the information on the website. |
| 6. If the website information is helpful; either download the information or bookmark the page. If you need additional information, return to the results page or conduct another search. | Downloading the information or bookmarking the website gives you access to it in the future. |
| 7. Try to complete the search process within 10 or 15 minutes. | The ability to effectively search the Internet is a vital information-accessing tool for dental health care providers. |

SECTION 4 READY REFERENCES

USING THE READY REFERENCES SECTION

Perforated Pages

- The Ready References may be removed from the book by tearing along the perforated lines on each page.
- Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

Internet Resources

- The Ready References section of each module contains, among other things, Internet Resources with websites that have information relevant to the module content.
- The Internet has a wealth of medical and dental health information; however, to access this information, each dental health care provider needs to be adept at searching the Internet.
- Peak Procedure 2-1 provides a procedure for conducting Internet searches.

Ready Reference 2-1. Internet Resources: Health Literacy

<http://www.AskME3.com>

The **Partnership for Clear Health Communication** is a coalition of national organizations that are working together to promote awareness and solutions around the issue of low health literacy and its effect on health outcomes. The website includes the **Ask Me 3 Presentation Tool Kit** designed to help patients communicate with health care providers.

<http://www.hsph.harvard.edu/healthliteracy>

The **Harvard School of Public Health, Health Literacy Studies** website is designed for professionals in health and education who are interested in health literacy. It contains many useful materials.

<http://www.pfizerhealthliteracy.com>

The **Pfizer Clear Health Communication Initiative** is a compendium that highlights Pfizer's solutions and tools to address low health literacy.

<http://www.ama-assn.org/go/healthdisparities>

The **American Medical Association Health Disparities** website includes information on AMA policy related to health disparities, resource links, and information on partnerships and activities that are part of the national effort to eliminate health disparities.

<http://www.omhrc.gov/templates/browse.aspx?lvl=1&lvlID=13>

The **Office of Minority Health Resource Center** was established by the U.S. Department of Health and Human Services Office of Minority Health in 1987. OMH-RC serves as a national resource and referral service on minority health issues.

Ready Reference 2-2. Tool for Health Literacy Assessment

A free **health literacy assessment tool** is available at <http://www.newestvitalsign.org>.

- The assessment tool—named the Newest Vital Sign (NVS)—is designed to quickly and effectively assess patients' health literacy skills.
- The NVS is a simple six-question assessment based on an ice cream nutrition label.
- It can be administered in about 3 minutes, and it will be available in both English and Spanish.
- The patient is given the label and asked a series of questions about it. Based on the number of correct answers given, health care providers can assess the patient's health literacy level and adjust their communication to ensure understanding.
- The assessment tool was tested with more than 1,000 patients.

MODULE REFERENCES

1. Health literacy: report of the Council on Scientific Affairs. Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs, American Medical Association. *JAMA* 1999;281:552–557.
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3. Center for Health Care Strategies, Inc. Strategies to improve patient education materials, 1998. <http://www.chcs.org/resources.hl.html>

ADDITIONAL SUGGESTED READINGS

Health Literacy

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Vastag B. Low health literacy called a major problem. *JAMA* 2004;291:2181–2182.

SECTION 5 THE HUMAN ELEMENT

Box 2-2. Through the Eyes of a Student

The first semester of school, I struggled to learn all the dental terminology. I had never worked in a dental office and I felt that I was falling behind the others in my class. Each day brought new words for me to understand and learn to pronounce—words like: armamentarium, line angle, and fossa. The dental terminology was like a whole new language.

Then, overnight, I found myself speaking a “new language.” I felt so proud of all the new words I had learned. I even told my parents that one of the actresses on their favorite television show has a diastema.

Soon I was in clinic, explaining things to my patients using my dental terminology. I thought that I was giving my patients a lot of very important information. That is, until Mrs. M. was my patient. On our first appointment, I told Mrs. M. all about how I would be scaling her teeth in sextants. I asked her if she understood this treatment plan and Mrs. M. gave me this big smile. She said, “I am sure that you are a very good dental hygienist, but my goodness, I have not understood one word you said in the past 10 minutes! If you want me to understand what you are saying you are going to have to talk in everyday English.”

Well, Mrs. M. was so nice and had that big grin on her face and we both just started to laugh. So, right then and there, I told Mrs. M. just to interrupt me every single time that I used a word that she did not understand.

Now, I never talk to a patient without thinking of Mrs. M. Of all the things that I have learned, I think that she taught me one of the most important things. Now, I talk with patients in everyday words.

Kim, student,
South Florida Community College

SECTION 6 QUICK QUESTIONS

1. _____ is defined as the ability of an individual to understand and act on health information and advice.
 - A. Cultural competence
 - B. Health literacy
 - C. Nonverbal communication
 - D. Proxemics
2. All of the following can have an adverse effect on an individual's dental health, EXCEPT:
 - A. A patient with low health literacy
 - B. A patient who is unable to read well
 - C. A clinician who uses dental terminology to explain a proposed treatment
 - D. A clinician who communicates in common words and phrases
3. Problems in understanding health information can result from all of the following, EXCEPT:
 - A. Use of dental terms that are unfamiliar to the patient
 - B. Using a familiar word but in the dental context
 - C. Using everyday words and phrases
 - D. The patient's embarrassment at not understanding what is being said
4. Most health care materials, such as patient instruction sheets or pamphlets, are written at a(n) _____ grade level.
 - A. Fifth
 - B. Sixth or seventh
 - C. Eighth or ninth
 - D. Tenth
5. According to the National Center for Education Statistics, the average American reads at the _____ grade level.
 - A. Fifth
 - B. Sixth or seventh
 - C. Eighth or ninth
 - D. Tenth

SECTION 7 SKILL CHECK

SKILL CHECKLIST

COMMUNICATIONS ROLE-PLAY

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of the patient.
- Student 2 = Plays the role of the clinician.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play. Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Uses appropriate nonverbal behavior such as maintaining eye contact, sitting at the same level as the patient, nodding head when listening to patient, etc.		
Interacts with the patient as a peer; avoids a condescending approach. Collaborates with the patient and provides advice.		
Communicates using common, everyday words. Avoids dental terminology.		
Listens attentively to the patient's comments. Respects the patient's point of view.		
Listens attentively to the patient's questions. Encourages patient questions. Clarifies for understanding, when necessary.		
Answers the patient's questions fully and accurately.		
Checks for understanding by the patient. Clarifies information.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total " S "s in each I column.		
Sum of " S "s _____ divided by Total Points Possible (7) equals the Percentage Grade _____		

NOTES

NOTES

MODULE 3

Overcoming Communication Barriers

MODULE OVERVIEW

Being able to effectively communicate—or participate in the exchange of information—is an essential skill for dental health care providers. For many dental health care providers in the United States today, providing patient-centered care involves learning to communicate effectively with patients even when various barriers to communication are present.

This module presents strategies for effectively communicating with:

- Patients who speak a different language than that of the dental health care provider
- Patients with culturally influenced health behaviors that differ from the health care beliefs of the dental clinician
- Young and school age children
- Adolescents
- Older adults
- Vision, hearing, or speech impaired individuals

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	Internet Resources: Hearing and Vision Impairment	

Internet Resources: Voice and Speech Impairment
English–Spanish Medical Dictionaries
Module References

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Communication Skill Checklist: Communications Role-Play

SKILL GOALS

- Explain how the U.S. population has changed between 1980 and 2000 and describe how these changes affect dental health care.
- Give an example of how cultural differences could affect communication.
- Define cultural competence.
- Discuss effective communication techniques for interacting with patients from different cultures.
- Discuss strategies that you can use to improve communication with a child.
- Discuss strategies that you can use to improve communication with an adolescent.
- Discuss strategies that you can use to improve communication with older adults.
- Discuss strategies that you can use to improve communication with visually, hearing-, and speech-impaired patients.

SECTION 1 LANGUAGE BARRIERS

CROSS-CULTURAL COMMUNICATION

Multiculturalism

- For many dental health care providers in the United States today, providing patient-centered care involves learning to communicate effectively with patients from non-English-speaking communities and with cultural backgrounds that may be unfamiliar.
- The United States has always had a significant foreign-born population, but the number of foreign born reached an all-time high of 32.5 million in 2002—equal to 11.5% of the U.S. population—according to the Current Population Survey (CPS) .[1]
- The Canadian 2001 population census indicates that 18.5% of the population in Canada is foreign-born.
- More than one-half of the 2002 foreign-born residents in the United States were born in Latin America—with 30% from Mexico alone.
- 26% were born in Asia, 14% in Europe, and 8% in Africa and other regions.
- 2000 Census data show that over 47 million persons speak a language other than English at home, up nearly 48% since 1990. Although the majority are able to speak English, over 21 million speak English less than “very well,” up 52% from 14 million in 1990.[2,3]
- By the year 2030, the Census Bureau predicts that 60% of the U.S. population will self-identify as white, non-Hispanic, and 40% will self-identify as members of other diverse racial and ethnic groups. Being competent to meet this communication challenge requires a set of skills, knowledge, and attitudes that enable the clinician to understand and respect patients’ values, beliefs, and expectations.
- Communication problems can easily occur if a patient is not fluent in English. An individual who is just learning the language may communicate well in everyday situations. In the dental setting, however, the same person may not fully understand what is being discussed.

TABLE 3-1. U.S.- and Foreign-Born Population, 1980 to 2000 [2,3]

	U.S.-Born	Foreign-Born
Number in millions		
1980	226.5	14.1
1990	248.7	19.8
2000	281.4	31.1
Percent change		
1980–1990	9.8	40.4
1990–2000	13.1	57.1

The Minority Population

According to the Census Bureau [1,2], the proportion of the overall population in the United States considered to be minority will increase from 26.4% in 1995 to 47.2% in 2050 (Fig. 3-1). According to the U.S. census data, between 1980 and 1990:

- African Americans increased from 26.5 million to 30 million
- Asian Americans/Pacific Islanders increased from 3.7 million to 7.2 million
- Hispanics/Latinos increased from 15.7 million to 22.3 million
- Native Americans/Alaskan Natives increased from 1.5 million to 2 million

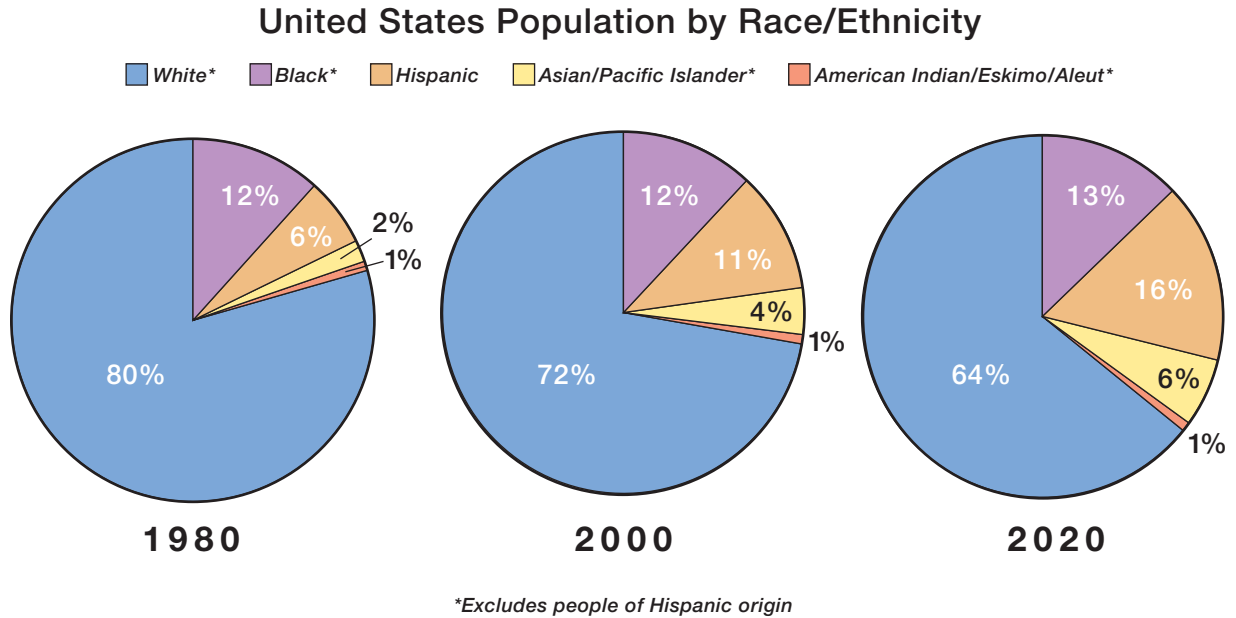


Figure 3-1. Demographics of the United States. The pie charts depict the changing demographics of the United States population from 1980 to 2020.[1,2]

CULTURAL COMPETENCE

Cultural competence is the application of cultural knowledge, behaviors, interpersonal, and clinical skills to enhance a dental health care provider's effectiveness in managing patient care.

- Cultural competence indicates an understanding of important differences that exist among various ethnic and cultural groups in our country.
- Understanding patients' diverse cultures—their values, traditions, history, and institutions—is not simply political correctness. It is essential in providing quality patient care.
- Culture shapes individuals' experiences, perceptions, decisions, and how they relate to others. It influences the way patients respond to dental services, preventive interventions, and impacts the way dental health care providers deliver dental care.
- In a culturally diverse society, dental professionals need to increase their awareness of and sensitivity toward diverse patient populations and work to understand culturally influenced health behaviors.

Cultural Differences

Dental professionals interact with people from varied ethnic backgrounds and cultural origins who bring with them beliefs and values that may differ from the health care provider's own.

- Understanding cultural differences can aid communication and thereby improve patient care.
- Preconceived ideas about a given culture can hinder a clinician from providing good care.
- Each patient is unique and his or her dental care needs differ. Some cultures may be offended by the intensely personal questions necessary for a health history and may perceive them as an inexcusable invasion of privacy.
- People of various backgrounds also perceive the desirability of making direct eye contact differently.
- To help avoid miscommunication and offending patients, dental health care providers must be sensitive to these cultural differences.

Box 3-1. Ways to Develop Cultural Competence

- Recognize your own assumptions.
- Value diversity. Demonstrate an appreciation for the customs, values, and beliefs of people from different cultural and language backgrounds.
- Demonstrate flexibility. Carry out changes to meet the needs of your diverse patients.
- Communicate respect. Do not judge. Show empathy.

Tips for Improving Cross-Cultural Communication

Cross-cultural communication is about dealing with people from other cultures in a way that minimizes misunderstandings and maximizes trust between patients and health care providers. The following simple tips will improve communication.

1. **Speak slowly, not loudly.** Slow down and be careful to pronounce words clearly. Do not speak loudly. A loud voice implies anger in many cultures. Speaking loudly might cause the patient to become nervous. Use a caring tone of voice and facial expressions to convey your message.
2. **Separate questions.** Try not to ask double questions. Let the patient answer one question at a time.
3. **Repeat the message in different ways.** If the patient does not understand a statement, try repeating the message using different words. Be alert to words the patient understands and use them frequently.
4. **Avoid idiomatic expressions or slang.** American English is full of idioms. An idiom is a distinctive, often colorful expression whose meaning cannot be understood from the combined meaning of its individual words, for example, the phrase “to kill two birds with one stone.”
5. **Avoid difficult words and unnecessary information.** Use short, simple sentences. Do not overwhelm the patient with too many facts and lengthy, complicated explanations.
6. **Check meanings.** When communicating across cultures, never assume that the other person has understood. Be an active listener. Summarize what has been said in order to verify it. This is a very effective way of ensuring that accurate cross-cultural communication has taken place.

7. **Use visuals where possible.** A picture really is worth a thousand words; the universal language of pictures can make communication easier. Picture boards (Fig. 3-2) with medical/dental images are helpful in getting your message across.



Figure 3-2. Picture board. A picture board can be used to communicate when pictures are more effective than words. (From Carter PJ, Lewsen S. *Lippincott's Textbook for Nursing Assistants*. Philadelphia: Lippincott Williams & Wilkins; 2005, Chapter 5, Fig. 5-4.)

8. **Avoid negative questions.** For example, "So, then, you don't want an appointment on Monday?" A better question would be "What day of the week is best for you?" Questions with negative verbs such as "don't" or "can't" are particularly confusing to Asian patients.
9. **Take turns.** Give the patient time to answer and explain his or her response.
10. **Be supportive.** Giving encouragement to those with weak English skills gives them confidence and a trust in you.
11. **Use humor with caution.** In many cultures, health care is taken very seriously. Some foreign-born patients may not appreciate the use of humor or jokes in the dental office setting.
12. **Watch for nonverbal cues.** Be attentive for signs of fear, anxiety, or confusion in the patient.
13. **Use interpreters to improve communication.** If the patient speaks no English or has limited understanding, use a trained clinical interpreter who is fluent in the patient's native language, as well as in medical and dental terminology. When using an interpreter, speak directly to the patient rather than to the interpreter.
14. **Don't use family members as translators.** A family member who is not knowledgeable in medical and dental terminology is likely to incorrectly translate your message. The presence of a family member or friend may also constitute a serious breach of patient confidentiality.
15. **Ask permission to touch the patient.** Ask permission to examine the patient and do not touch the patient until permission is granted.
16. **Check for understanding.** Ask the patient to repeat instructions. Correct any misunderstandings. This can be done diplomatically by saying something like, "Will you repeat the instructions that I gave you to make sure that I did not forget anything?"
17. **Provide written material.** When possible, provide simple, illustrated materials for the patient to take home.

SECTION 2 AGE BARRIERS

Young children, adolescents, and older patients present unique communication concerns.

- Even experienced health care providers can find it challenging to communicate effectively with individuals who are much younger or older in age.
- It can be difficult to relate to the life experiences or health problems of someone who is 30 or 40 years older.
- Some health care providers with limited experience with young children find it difficult to know what to say and what not to say when speaking with young children.
- Children and adolescents frequently are accompanied to the office by a parent. An adult child or caregiver may accompany older adults. Parents, adult children, and caregivers add a unique aspect to the communication process. The patient should always be the focus of the clinician's attention and, when possible, information should be exchanged directly with the patient.

COMMUNICATING WITH CHILDREN

Box 3-2. Communicating with Young and School Age Children

- Introduce yourself to the child. Speak softly; use simple words and the child's name.
- Adjust your height to that of the child.
- Treat children with respect—over the age of four they can understand a lot.
- Describe actions before carrying them out.
- Make contact with the child (e.g., “I promise to tell you everything I’m going to do if you’ll help me by cooperating.”).
- Talk to young children throughout the assessment procedure.
- Give praise during each stage of the assessment, such as, “that’s good,” “well done,” etc.
- Be aware of needs and concerns that are unique to children. For example, children may avoid wearing orthodontic head gear due to pressures and comments from peers.
- Do not ask the child's permission to perform a procedure if it must be performed in any case.
- Do not talk about procedures that will be done later in the appointment to children who are younger than 5 years of age. Very young children have no clear concept of future events and will imagine the worst about what could happen.
- Communicate all information directly to the child or to both child and the parent, ensuring that the child remains the center of your attention. If complex information must be communicated to the parent, arrange to speak to the parent alone (without the child's presence).

COMMUNICATING WITH ADOLESCENTS

Box 3-3. Communicating with Teens

- Speak in a respectful, friendly manner, as to an adult.
- Respect independence; address the teenager directly rather than the parent.
- Obtain health history information directly from the teenager, rather than the parent, if possible.
- Recognize that a teenager may be reluctant to answer certain questions honestly in the parent's presence.
- Ask questions about tobacco, drug, or alcohol use privately.
- Some teenagers may be intensely shy or self-conscious; others may be overconfident and boastful. Allow silence so that the teenager can express opinions and concerns.

COMMUNICATING WITH OLDER ADULTS

- The United States population is aging at a dramatic rate.
- The U.S. population of persons 65 and older will increase by 76% from 2010 to 2030.
- The numbers of persons 85 and older in the United States will increase by 116% from 2010 to 2030.
- This tremendous demographic shift will have a profound effect on the health care sector. Over the next 50 years or so, there will most likely be an increased demand for dental health care providers skilled in caring for the geriatric population.[9]
- Communicating with older people often requires extra time and patience because of the physical, psychological, and social changes of normal aging.
- Even more effort is needed when an elderly person has a communication disorder.
- Communicating with older adults requires many of the same rules as for children—the patient should always be the focus of the dental health care provider's attention.

Box 3-4. Communicating with Older Adults

- Before you begin your conversation, reduce background noises that may be distracting (close the examination room door; move from a noisy reception area to a quieter place).
- Begin the conversation with casual topics such as the weather or special interests of the person.
- Keep your sentences and questions short. Avoid quick shifts from topic to topic.
- Allow extra time for responding. As people age, they function better at a slower pace; do not hurry them.
- Take time to understand the patient's true concerns. Some older people will hold back information feeling that nothing can be done or not wanting to "waste your time."
- Take time to explain, in easy to understand language, the findings of your examination.
- Look for hints from eye gaze and gestures that your message is being understood.
- Speak plainly and make sure that the patient understands by having him or her repeat instructions. For example, say: *"I may have forgotten to tell you something important. Would you please repeat what I told you?"*

SECTION 3 VISION AND HEARING BARRIERS

COMMUNICATION WITH THE VISUALLY IMPAIRED

Although estimates vary, there are approximately 10 million blind and visually impaired people in the United States. Approximately 1.3 million Americans are legally blind. There are approximately 5.5 million elderly individuals who are blind or visually impaired. There are approximately 55,200 legally blind children.

Box 3-5. Effective Communication with a Person Who Is Blind or Visually Impaired

- As soon as you enter the room, be sure to greet the person. This alerts the person to your presence, avoids startling him or her, and eliminates uncomfortable silences. Address the person by name, so he or she will immediately know that you are talking to him or her rather than someone who happens to be nearby. When greeting a person who is blind or visually impaired, do not forget to identify yourself. For example, “Hello, Mrs. Jones. I am Robin Shiffer, the dental hygienist here in Dr. Rolfs’ office.”
- Speak directly to the person who is visually impaired, not through an intermediary, such as a relative or caregiver.
- Speak distinctly, using a natural conversational tone and speed. Unless the person has a hearing impairment, you do not need to raise your voice.
- Explain the reason for touching the person before doing so.
- Be an active listener. Give the person opportunities to talk. Respond with questions and comments to keep the conversation going. A person who is visually impaired cannot necessarily see the look of interest on your face, so give verbal cues to let him or her know that you are actively listening.
- Always answer questions and be specific or descriptive in your responses.
- Orient the person to sounds in the environment. For example, explain and demonstrate the sound that an ultrasonic instrument makes before using it in the patient’s mouth.
- Tell the patient when you are leaving the room and where you are going (e.g., I am going to develop the x-rays that we just took).
- Be precise and thorough when you describe people, places, or things to someone who is blind. Do not leave out things or change a description because you think it is unimportant or unpleasant.
- Feel free to use words that refer to vision during the course of a conversation. Vision-oriented words such as look, see, and watching TV are parts of everyday verbal communication. Making reference to colors, patterns, designs, and shapes is perfectly acceptable. The words *blind* and *visually impaired* are also acceptable in conversation.
- Indicate the end of a conversation with a person who is blind or severely visually impaired to avoid the embarrassment of leaving the person speaking when no one is actually there.
- When you speak about someone with a disability, refer to the person and then to the disability. For example, refer to “a person who is blind” rather than to “a blind person.”

Providing Directions to a Blind or Visually Impaired Individual

When giving directions from one place to another, people who are not visually impaired tend to use gestures—pointing, looking in the direction referred to, etc.—at least as much as they use verbal cues. This is not helpful to a person who is blind or has a visual impairment. And often even verbal directions are not precise enough for a person who cannot see—for example, “*It’s right over there*” or “*It’s just around the next corner.*” Where is “there?” Where is “the next corner?” In the dental office you might say something like: “*Walk along the wall to your left past three doorways. The room that we want is at the fourth doorway; make a sharp turn to the right to enter the room.*”

The Americans with Disabilities Act (ADA) prohibits businesses that serve the public from banning service animals. A service animal is defined as any guide dog or other animal that is trained to provide assistance to a person with a disability. The animal does not have to be licensed or certified by the state as a service animal. The service animal should not be separated from its owner and must be allowed to enter the treatment room with the patient. The ADA law supersedes local health department regulations that ban animals in health care facilities.

Box 3-6. Acting as a Sighted Guide

- Sighted guide technique enables a person who is blind to use a person with sight as a guide. The technique follows a specific form and has specific applications.
- Offer to guide a person who is blind or visually impaired by asking if he or she would like assistance. Be aware that the person may not need or want guided help; in some instances it can be disorienting and disruptive. Respect the wishes of the person you are with.
- If your help is accepted, offer the person your arm. To do so, tap the back of your hand against the palm of his or her hand. The person will then grasp your arm directly above the elbow. Never grab the person’s arm or try to direct him or her by pushing or pulling.
- Relax and walk at a comfortable normal pace. Stay one step ahead of the person you are guiding, except at the top and bottom of stairs. At these places, pause and stand alongside the person. Then resume travel, walking one step ahead. Always pause when you change directions, step up, or step down.
- It is helpful, but not necessary, to tell the person you are guiding about stairs, narrow spaces, elevators, and escalators.
- The standard form of sighted guide technique may have to be modified because of other disabilities or for someone who is exceptionally tall or short. Be sure to ask the person you are guiding what, if any, modifications he or she would like you to use.
- When acting as a guide, never leave the person in “free space.” When walking, always be sure that the person has a firm grasp on your arm. If you have to be separated briefly, be sure the person is in contact with a wall, railing, or some other stable object until you return.
- To guide a person to a seat, place the hand of your guiding arm on the seat. The person you are guiding will find the seat by following along your arm.

COMMUNICATION WITH THE HEARING IMPAIRED

Approximately one out of every ten people has a significant hearing loss. Within the population of individuals who are hearing impaired, most are hard of hearing. Only a small proportion of this group is deaf. In describing hearing loss, people who are hard of hearing may say that they can hear sounds but cannot understand what is being said. For many people who are hard of hearing, low-frequency speech sounds such as “a,” “o,” and “u” may be clearly heard, while other high-frequency sounds such as “s,” “th,” and “sh” may be much less distinct. In this situation, speech is heard but often misunderstood. “Watch” may be mistaken for “wash” and “pen” for “spent.” A clearer comprehension of speech may be gained with a hearing aid or a cochlear implant. However, use of these devices does not restore normal hearing.

Presbycusis (presby = elder, cusis = hearing) is the loss of hearing that gradually occurs in most individuals as they grow old. Everyone who lives long enough will develop some degree of presbycusis, some sooner than others. Those who damage their ears from loud noise exposure will develop it sooner. It is estimated that 40% to 50% of people 75 and older have some degree of hearing loss. It involves a progressive loss of hearing, beginning with high-frequency sounds such as speech. The loss associated with presbycusis is usually greater for high-pitched sounds. It may be difficult for someone to hear the nearby chirping of a bird or the ringing of a telephone, whereas they would be able to hear low-pitched voices.

Box 3-7. Effective Communication with a Person who is Hearing Impaired

- Move closer to the person. Shortening the distance between the speaker and listener will increase the loudness of sound. This approach is much more effective than raising your voice. Never shout at a person who is hard of hearing.
- Reduce background noise. Many noises that we take for granted are amplified by a hearing aid or cochlear implant.
- Talk face to face. Speak at eye level. Do not cover your mouth with a mask when you're asking the patient questions or giving instructions.
- Try rewording a message. At times a person with a hearing loss may be partially dependent on speech reading (lip reading) because some sounds may not be easily heard even with a hearing aid. Because some words are easier to speech read than others, rephrasing a message may make it easier for the person to understand.
- Use a notepad to write down important questions or directions so that the person can read them. This helps eliminate misunderstandings. If the person cannot read or reads in a language that is unfamiliar to you, a picture board (see Fig. 3-2) may be quite helpful.
- Make sure that the person fully understands what you said. Some people, especially if the hearing loss is recent, are reluctant to ask others to repeat themselves. They feel embarrassed by their hearing loss. Simply ask the person to repeat what you said. For example, say, “If you could please repeat back to me what I said, I can make sure I told you everything that I need to.”
- Show special awareness of the hearing problem. Call the person with a hearing loss by name to initiate a communication. Give a frame of reference for the discussion by mentioning the topic at the outset (“I would like to review your medications”). Be patient, particularly when the person is tired or ill and may be less able to hear.

SECTION 4 SPEECH BARRIERS

COMMUNICATION WITH THE SPEECH IMPAIRED

It is important to remember that problems with speech or language do not necessarily mean that the person has an intellectual impairment. For example, people who have suffered a stroke are often frustrated when others think that their intellect has been impaired because of their problems with communication. Difficulty with speech does not have anything to do with intelligence. If understanding is difficult, it may be useful to ask the person to write a word or phrase.

Dysarthria

Dysarthria refers to speech problems that are caused by the muscles involved with speaking or the nerves controlling them. Individuals with dysarthria have difficulty expressing certain words or sounds. Speech problems experienced include:

- Slurred speech
- Speaking softly or barely able to whisper
- Slow rate of speech
- Rapid rate of speech with a “mumbling” quality
- Limited tongue, lip, and jaw movements
- Abnormal rhythm when speaking
- Changes in vocal quality (“nasal” speech or sounding “stuffy”)
- Drooling or poor control of saliva
- Chewing and swallowing difficulty
- Common causes of dysarthria are poorly fitting dentures, stroke, any degenerative neurologic disorder, and alcohol intoxication.
- After a stroke or other brain injury, the muscles of the mouth, face, and respiratory system may become weak, move slowly, or not move at all.
- Some former severe alcoholics who have developed brain damage due to drinking may have continued problems with language, even after years of sobriety.

Aphasia

Aphasia is a disorder that results from damage to language centers of the brain.

- It can result in a reduced ability to understand what others are saying, to express ideas, or to be understood.
- Some individuals with this disorder may have no speech, whereas others may have only mild difficulties recalling names or words.
- Others may have problems putting words in their proper order in a sentence.
- The ability to understand oral directions, to read, to write, and to deal with numbers may also be disturbed.
- For almost all right-handers and for about half of left-handers, damage to the left side of the brain causes aphasia. As a result, individuals who were previously able to communicate through speaking, listening, reading, and writing become more limited in their ability to do so.
- The most common cause of aphasia is stroke, but gunshot wounds, blows to the head, other traumatic brain injury, brain tumor, Alzheimer’s disease, and transient ischemic attack (TIA) can also cause aphasia.

Box 3-8. Strategies for Communicating with Persons with Speech Impairment

- Book longer appointment times to allow for the longer time needed for communication.
- Whenever possible, speak directly to the patient; even if comprehension is limited, the patient will be more responsive if he or she is an active participant.
- Develop a tolerance for silences. Many patients require extra time to process your questions and/or to formulate a response.
- Do not talk while the patient is formulating a response—this is very distracting.
- Try not to panic when communicating with a person who has impaired speech. If you feel nervous, do not let it show.
- Never finish a sentence for someone who is struggling with his or her speech—be patient and wait for him or her to finish.
- Find out if the patient has his or her own way of indicating “yes” or “no” (e.g., looking up for “yes”).
- If you are having problems understanding the person, say so. Do not pretend you understand if you do not, as this will inevitably create problems later on. Simply apologize and ask if the patient would mind writing down what it is he or she wants to say.
- If you are having difficulties communicating with the patient, ask permission to direct your questions to the support person. Remember to look directly at the patient from time to time so that he or she still feels a part of the conversation.
- Use gestures and pictures to help the patient understand. For example, wave hello and goodbye, point to a tooth, or show simple pictures to clarify procedures.

COMMUNICATION WITH THE VOICE IMPAIRED

Laryngectomy

Laryngectomy—the surgical removal of the voice box due to cancer—affects approximately 9000 individuals each year; most are older adults. People who have undergone laryngectomy have several options for communication:

- **The Artificial Larynx.** Held against the neck, the artificial larynx transmits an electronic sound through the tissues, which is then shaped into speech sounds by the lips and tongue. The user articulates in the normal way.
- **Esophageal Voice.** Esophageal voice is achieved by learning to pump air from the mouth into the upper esophagus. The air is then released, causing the pharyngo-esophageal segment to vibrate to produce a hoarse low-pitched voice.
- **Surgical Voice Restoration.** Fitting a prosthesis or valve into a puncture hole between the trachea and esophagus either at the time of surgery or at a later date may restore voice. The individual occludes the stoma when he or she wishes to speak. Air then passes through the valve into the esophagus, producing voice in the same way as for esophageal voice.
- **Silent Mouthing/Writing/Gesture.** A small percentage of patients never acquire a voice and are unable to use an electronic larynx. They communicate by silently articulating words or a mixture of writing and gesture.

Box 3-9. Effective Communication with a Person with a Laryngectomy

- Give the patient plenty of time to speak. Do not hurry the person; pressure will considerably affect the ability to communicate.
- Ask the patient to repeat if you do not understand. Do not pretend you understand if you do not—it will be obvious to the patient that you do not understand.
- Watch a person's lips if you are finding it hard to understand him or her.
- Do not assume it is a hoax call or that someone is playing a joke if you hear an electronic sounding voice or someone struggling to communicate over the telephone.

SECTION 5 READY REFERENCES

Ready Reference 3-I. Internet Resources: Cultural Competence

<http://gucchd.georgetown.edu/nccc/index.html>

Website of the **National Center for Cultural Competence**. The mission of the National Center for Cultural Competence (NCCC) is to increase the capacity of health programs to design, implement, and evaluate culturally and linguistically competent service delivery systems.

<http://gucchd.georgetown.edu/nccc/topic3.html>

Information on **disparities in oral health** on the **National Center for Cultural Competence** website.

<http://www.diversityrx.org/HTML/DIVRX.html>

Promoting language and cultural competence to improve the quality of health care for minority, immigrant, and ethnically **diverse** communities.

Ready Reference 3-2. Internet Resources: Hearing and Vision Impairment

<http://www.asha.org>

The **American Speech-Language-Hearing Association (ASHA)** website has resources on communication and communication disorders.

<http://www.nidcd.nih.gov/health/voice/index.asp>

The **National Institute on Deafness and other Communication Disorders (NIDCD)** index of resources on voice, speech, and language.

<http://www.nidcd.nih.gov/health/hearing/index.asp>

The **National Institute on Deafness and other Communication Disorders (NIDCD)** resources on hearing and deafness.

<http://medlineplus.gov/>

The **MedlinePlus** website provides health information from the world's largest medical library, the National Library of Medicine. MedlinePlus has extensive information from the National Institutes of Health and other trusted sources on over 650 diseases and conditions. The **Health Topics** section has information on hearing problems and disorders, speech communication disorders, vision impairment, and blindness.

<http://www.agbell.org/>

The **Alexander Graham Bell Association for the Deaf and Hard of Hearing** is dedicated to the mission of promoting communication for people with hearing loss. The **Information and Resources** section offers up-to-date statistics, fact sheets, and information on communication options.

<http://www.audiology.org/consumer/guides/>

The **American Academy of Audiology** offers consumer guides including "Getting Through: Talking to a Person Who is Hard of Hearing."

<http://www.raisingdeafkids.org/communicating/tips/adult.jsp>

website of the **Deafness and Family Communication Center (DFCC)** at the Children's Hospital of Philadelphia: tips on communicating with a person who is deaf.

<http://www.afb.org/Section.asp?SectionID=&DocumentID=2104>

Instructions on how to guide a person who is blind on the website of the **American Foundation for the Blind**.

<http://www.drivingvision.com/walk.html>

Protocols for interacting with individuals who are blind on the website of Larry C. Colbert, who lost his eyesight from retinitis pigmentosa.

Ready Reference 3-3. Internet Resources: Voice and Speech Impairment

<http://www.nidcd.nih.gov/health/voice/aphasia.asp>

The **National Institute on Deafness and other Communication Disorders (NIDCD)** resources on aphasia.

<http://www.nidcd.nih.gov/health/voice/dysph.asp>

The **National Institute on Deafness and other Communication Disorders (NIDCD)** resources on dysarthria.

<http://www.aphasia.org/>

The website of the **National Aphasia Association** has links to a wealth of information on aphasia. Includes links to information about aphasia in different languages, including Spanish.

<http://www.americanheart.org>

Enter “**aphasia**” in the SEARCH box on the **American Heart Association** website for many resources on this topic.

<http://www.cplqlld.org.au/techsupport/techunit/information/facts/5839>

Cerebral Palsy League of Queensland, Australia website: information on complex communication needs—improving communication.

www.aphasia.org/NAAfactsheet.html

National Aphasia Association website: Aphasia Fact Sheet

www.cancer.org/docroot/MBC/content/MBC_3_2X_Speech_After_Laryngectomy.asp?sitearea=MBC

American Cancer Society website: Speech after laryngectomy

www.inhealth.com/voiceresorationwhatsalary.html

The **In Health Technologies** website: What’s a laryngectomy?

<http://um-jmh.org/body.cfm?id=1483>

Jackson Health System website: Laryngectomy Handbook

Ready Reference 3-4. English–Spanish Medical Dictionaries

McElroy OH., Grabb LL. *Spanish–English, English–Spanish Medical Dictionary*, 3rd ed. Philadelphia: Lippincott Williams & Wilkins.

Springhouse. *Medical Spanish Made Incredibly Easy*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins.

Wilber CJ, Lister S. *Medical Spanish, 4th Edition—The Instant Survival Guide*. Boston: Butterworth-Heinemann, 2004.

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1. United States Census Bureau. *The Foreign-Born Population in the United States: March 2001*. U.S. Department of Commerce (March 2003):1–161.
2. Hobbs F, Stoops N. *Demographic trends in the 20th century: [Census 2000 special reports]*. Washington D.C.: U.S. Department of Commerce, Economics, and Statistics Administration, 2002;163:67.
3. United States Census Bureau. *Census 2000. Modified Race Data Summary File*. Washington D.C.: U.S. Department of Commerce, Economics, and Statistics Administration, 2002:1.

ADDITIONAL SUGGESTED READINGS

Cultural Competency

Gebre K, Willman A. A research-based didactic model for education to promote culturally competent nursing care in Sweden. *J Transcult Nurs* 2003;14(1):55–61.

Narayan MC. Cultural assessment in home health care. *Home Health Nurse* 1997;15(10):663–670; quiz 671–672.

Purnell L. (2000). A description of the Purnell Model for Cultural Competence. *J Transcult Nurs* 2000;11(1):40–46.

Watts RJ. “Race consciousness and the health of African Americans.” *Online J Issues Nurs* 2003;8(1):4.

Hearing Impaired

Nattinger AB. Communicating with deaf patients. *JAMA* 1995;274(10):795.

SECTION 6 THE HUMAN ELEMENT

Box 3-10. Through the Eyes of a Student: Helping Patients with Special Needs

I have this 92-year-old patient, Mrs. W., who always comes with her daughter. Mrs. W. lives in an assisted living facility. I saw Mrs. W. in the dental clinic last year, too, and she always has a heavy amount of plaque when she comes in. I talked to her daughter about this in the past. The daughter lives an hour away from her mother and so cannot be there to brush her mother's teeth every day. Today the daughter said that she asked the staff at the assisted living facility to assist her mother in brushing her teeth, but she doesn't think that they have been helping her. I felt a little bad for Mrs. W. because I know these places are commonly under-staffed and oral hygiene care is not a priority.

The daughter said that there is a problem getting the staff to do things for her mother, as they are so busy. She said that her mother has low blood sugar and is supposed to have a protein snack each afternoon. Her mother didn't get her needed snack until her physician wrote it as "a prescription" to the staff.

For me, her story about the snack was like a light bulb going off in my head! What a great idea! So I talked with our clinic's dentist and he wrote "brush teeth after evening meal" on a prescription and signed it. Mrs. W.'s daughter was very pleased that we cared enough about her mother to write this "prescription."

Melissa, recent graduate
East Tennessee State University

SECTION 7 QUICK QUESTIONS

1. According to the 2000 census data, fewer than 1 million people in the United States speak a language other than English at home.
 - A. True
 - B. False
2. An individual who communicates well in everyday situations, such as work, will most likely have no communication problems in the dental office. In the dental office, communication problems can easily occur if a patient is not fluent in English.
 - A. Both statements are true.
 - B. Both statements are false.
 - C. The first statement is true. The second statement is false.
 - D. The first statement is false. The second statement is true.
3. _____ is defined as the application of cultural knowledge, behaviors, interpersonal, and clinical skills to enhance communication.
 - A. Health care literacy
 - B. Cultural competence
 - C. Stereotyping
 - D. Cultural blindness
4. All of the following are effective strategies for improving cross-cultural communication, EXCEPT:
 - A. Speaking slowly, not loudly.
 - B. Using a family member as a translator when explaining the patient's dental problems.
 - C. Using visuals, such as a picture board.
 - D. Repeating your message using different words from those that you used the first time.
5. Most clinicians find it very easy to relate to the life experiences of someone who is 40 years older. When treating a child, the patient should always be the focus of the clinician's attention and where possible, information should be exchanged directly with the child.
 - A. Both statements are true.
 - B. Both statements are false.
 - C. The first statement is true. The second statement is false.
 - D. The first statement is false. The second statement is true.
6. Children who are under 5 years of age have no clear concept of future events. When treating a child who is 3 years old, it is best not to talk about procedures that will be done later in the appointment.
 - A. Both statements are true.
 - B. Both statements are false.
 - C. The first statement is true. The second statement is false.
 - D. The first statement is false. The second statement is true.

7. A teenager may be reluctant to answer certain medical history questions—such as drug use—in the presence of a parent or guardian. For a teenage patient, the most accurate medical history information can be obtained from the teenager's parent.
- A. Both statements are true.
 - B. Both statements are false.
 - C. The first statement is true. The second statement is false.
 - D. The first statement is false. The second statement is true.
8. Background noises may be distracting to older adults engaged in a conversation. Some older people may be reluctant to discuss their dental concerns because they feel that nothing can be done to help them.
- A. Both statements are true.
 - B. Both statements are false.
 - C. The first statement is true. The second statement is false.
 - D. The first statement is false. The second statement is true.
9. When explaining your assessment findings to a person who is blind, it is best to speak to the relative or caregiver who accompanied the patient to the office. When speaking to a blind person, it is perfectly acceptable to use visually oriented words such as colors or shapes in the conversation.
- A. Both statements are true.
 - B. Both statements are false.
 - C. The first statement is true. The second statement is false.
 - D. The first statement is false. The second statement is true.
10. All of the following are helpful when communicating with a patient who has a speech impairment, EXCEPT
- A. Booking longer appointments
 - B. Helping the patient by supplying the words that he or she is struggling to convey
 - C. Staying calm and taking the time to listen patiently while the patient communicates
 - D. Finding out if the patient has his or her own special ways of communicating

SECTION 8 SKILL CHECK

SKILL CHECKLIST COMMUNICATIONS ROLE-PLAY

Student: _____

Evaluator: _____

Date: _____

Roles:

Student 1 = Plays the role of the patient.

Student 2 = Plays the role of the clinician.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Uses appropriate nonverbal behavior such as maintaining eye contact, sitting at the same level as the patient, nodding head when listening to patient, etc.		
Interacts with the patient as a peer; avoids a condescending approach. Collaborates with the patient and provides advice.		
Communicates using common, everyday words. Avoids dental terminology.		
Listens attentively to the patient's comments. Respects the patient's point of view.		
Listens attentively to the patient's questions. Encourages patient questions. Clarifies for understanding, when necessary.		
Answers the patient's questions fully and accurately.		
Checks for understanding by the patient. Clarifies information.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total "S"s in each column.		
Sum of "S"s _____ divided by total points possible (6) equals the percentage Grade _____		

NOTES

NOTES

MODULE 4

Medical History

MODULE OVERVIEW

The patient's medical history provides information about the patient's physical and psychological condition. The information gathered from taking the medical history allows the clinician to determine whether dental treatment alterations are necessary for the patient to undergo each specific dental procedure safely.

This module covers taking and interpreting the medical history, including:

- Gathering information regarding a patient's medical conditions and diseases
- Gathering information regarding a patient's prescribed medications and supplements
- Determining how a patient's medical conditions and/or medications impact dental care

MODULE OUTLINE

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SKILL GOALS

- Demonstrate skills in conducting online research on medical conditions/diseases and medications.
- Describe how various systemic conditions/diseases and medications can impact dental care.
- Demonstrate skills necessary to obtain a complete and thorough medical history.
- Describe the types of information that should be entered in the Medical Alert Box on the medical history form.
- List the information that should be indicated on a medical consultation form.
- Describe contraindications and complications for dental care presented by various medical conditions/diseases and prescription medications.
- Recognize findings that have implications in planning dental treatment.
- Provide appropriate referral to a physician or dental specialist when findings indicate the need for further evaluation.
- Demonstrate the ability to apply information learned in the classroom and clinical activities to the fictitious patient cases A–E in this module, including: reviewing completed health history forms, conducting research, formulating follow-up questions, conducting a patient interview, and determining the medical risk of dental treatment to the patient.

SECTION 1 THE MEDICAL HISTORY ASSESSMENT

RELATIONSHIP BETWEEN SYSTEMIC AND ORAL HEALTH

There are many reasons for conducting a thorough assessment of the patient's past and current health status. The most important reason is to protect the health of the patient. There is strong two-way relationship between systemic health and oral conditions.

- Systemic diseases and conditions may have oral implications (e.g., patients with poorly controlled diabetes do not respond well to periodontal surgery).
- Medications used to treat systemic diseases and conditions can produce changes in oral health (e.g., certain medications can result in gingival hyperplasia—overgrowth of the gingiva).
- Systemic conditions, diseases, or medications may necessitate precautions to ensure that planned dental treatment will not be harmful to the patient's systemic health. For example, a patient who has a history of well-controlled congestive heart failure may need certain treatment modifications such as short appointments and supplemental oxygen by nasal cannula.
- Oral manifestations may identify conditions that should be evaluated by a primary care physician. For example, periodontal disease that does not respond to treatment may be an indication of uncontrolled diabetes since this condition increases susceptibility to infection and results in slower healing rates.
- Substances, materials, or drugs used in dental treatment may produce an adverse reaction in certain patients (e.g., a patient with allergies may be allergic to latex.)

HEALTH HISTORY FORMS

Overview

A health history form is used to gather subjective data about the patient and explore past and present problems. This form assists patients in providing an account of their health history.

- Health history forms are available in many different formats and lengths.
- Many health history forms include a list of diseases and medical conditions that aid patients in recalling their medical history.
- Most forms ask the patient to check or circle “yes” or “no” for each question or item on the form. Some health history forms have space that allows patients to provide additional information in response to questions and to list their medications.
- It is common for dental offices and clinics to design history forms to meet the unique needs of the office or clinic and its patient population.
- Regardless of the format or length, the health history form should provide the health care professional with complete information regarding the past and present health of each patient.

Caring for Patients in a Multicultural Society

The United States and Canada are multicultural societies where many of the residents report being born in a foreign country. This diversity in ethnicity, culture, and language enriches these countries, but it also complicates efforts to provide safe dental care.

- For many dental health care providers in the United States and Canada, assessing a patient's history involves finding a way to communicate with patients who speak another language.

- Ideally, an interpreter who is specially trained to conduct translations involving medical and dental terminology, conditions, and procedures would be a member of every dental staff. Employing a trained medical/dental interpreter who is fluent in many different languages is an unrealistic option for most dental offices and clinics.
- Using a health history form that has been translated into different languages is a more practical solution to the problem of obtaining history information from non-English speaking patients. Today, more than half of the foreign-born residents in the United States were born in Latin America. The American Dental Association has adult and child history forms in Spanish to meet the needs of patients whose language of origin is Spanish.

MULTILANGUAGE HEALTH HISTORY PROJECT

The **Multi-Language Health History Project** began as an initiative of the University of the Pacific Arthur A. Dugoni School of Dentistry to address the needs of patients and dental health care providers who do not speak the same language. With the assistance of the California Dental Association and MetLife Inc., the history form has been translated into over 25 different languages. Transcend, a California company specializing in translations services certifies that the translations are correct.

Obtaining and Using the Multi-Language Forms

- Directions for downloading copies of the Multi-Language Health History forms are found in Box 4-1.
- The UOP health history was translated, keeping the same question numbering sequence. Using a translated form, a dental health care provider who speaks English and is caring for a patient who doesn't, can ask the patient to complete the health history in his or her own language.
- The clinician then compares the English health history to the patient's translated health history, scanning the translated version for "yes" responses. When a "yes" is found, the dental health care provider is able to look at the question number and match it to the question number on the English version. For example, question 34 on the Japanese version is the same as question 34 on the English version and relates to high blood pressure.
- In the same manner, a dental health care provider who speaks Spanish could use the multilanguage health history with a patient who speaks French. A few examples of the UOP health history form are shown in Figures 4-1 to 4-4.

Box 4-1. Downloading Copies of the Multilanguage Forms

The Multi-Language Health History forms can be downloaded at no cost on the Internet.

1. Connect a computer to the internet and open an Internet browser.
2. Free PDF files of the Multi-language Health History forms can be downloaded from:
 - The Arthur A. Dugoni School of Dentistry website. On the Internet browser, enter this website address <http://www.dental.pacific.edu/DentalProhistoryForms.htm> in the rectangular box near the top of the browser page. Click on "GO" or hit the "return key" on the keyboard. The selected web page should open.

NOTE: A software application—**Adobe Acrobat Reader**—is needed to open and view a PDF document and can be downloaded at <http://www.adobe.com/products/acrobat/read-step2.html>.

MetLife

HEALTH HISTORY

Pacific Dental School

English

Patient Name: _____ Patient Identification Number: _____
 Birth Date: _____

I. CIRCLE APPROPRIATE ANSWER (leave Blank if you do not understand question):

1. Yes No Is your general health good?
2. Yes No Has there been a change in your health within the last year?
3. Yes No Have you been hospitalized or had a serious illness in the last three years?
If YES, why? _____
4. Yes No Are you being treated by a physician now? For what? _____
Date of last medical exam? _____ Date of last Dental exam _____
5. Yes No Have you had problems with prior dental treatment?
6. Yes No Are you in pain now?

II. HAVE YOU EXPERIENCED:

- | | |
|---|-----------------------------------|
| 7. Yes No Chest pain (angina)? | 18. Yes No Dizziness? |
| 8. Yes No Swollen ankles? | 19. Yes No Ringing in ears? |
| 9. Yes No Shortness of breath? | 20. Yes No Headaches? |
| 10. Yes No Recent weight loss, fever, night sweats? | 21. Yes No Fainting spells? |
| 11. Yes No Persistent cough, coughing up blood? | 22. Yes No Blurred vision? |
| 12. Yes No Bleeding problems, bruising easily? | 23. Yes No Seizures? |
| 13. Yes No Sinus problems? | 24. Yes No Excessive thirst? |
| 14. Yes No Difficulty swallowing? | 25. Yes No Frequent urination? |
| 15. Yes No Diarrhea, constipation, blood in stools? | 26. Yes No Dry mouth? |
| 16. Yes No Frequent vomiting, nausea? | 27. Yes No Jaundice? |
| 17. Yes No Difficulty urinating, blood in urine? | 28. Yes No Joint pain, stiffness? |

III. DO YOU HAVE OR HAVE YOU HAD:

- | | |
|--|--|
| 29. Yes No Heart disease? | 40. Yes No AIDS |
| 30. Yes No Heart attack, heart defects? | 41. Yes No Tumors, cancer? |
| 31. Yes No Heart murmurs? | 42. Yes No Arthritis, rheumatism? |
| 32. Yes No Rheumatic fever? | 43. Yes No Eye diseases? |
| 33. Yes No Stroke, hardening of arteries? | 44. Yes No Skin diseases? |
| 34. Yes No High blood pressure? | 45. Yes No Anemia? |
| 35. Yes No Asthma, TB, emphysema, other lung diseases? | 46. Yes No VD (syphilis or gonorrhea)? |
| 36. Yes No Hepatitis, other liver disease? | 47. Yes No Herpes? |
| 37. Yes No Stomach problems, ulcers? | 48. Yes No Kidney, bladder disease? |
| 38. Yes No Allergies to: drugs, foods, medications, latex? | 49. Yes No Thyroid, adrenal disease? |
| 39. Yes No Family history of diabetes, heart problems, tumors? | 50. Yes No Diabetes? |

IV. DO YOU HAVE OR HAVE YOU HAD:

- | | |
|------------------------------------|--------------------------------|
| 51. Yes No Psychiatric care? | 56. Yes No Hospitalization? |
| 52. Yes No Radiation treatments? | 57. Yes No Blood transfusions? |
| 53. Yes No Chemotherapy? | 58. Yes No Surgeries? |
| 54. Yes No Prosthetic heart valve? | 59. Yes No Pacemaker? |
| 55. Yes No Artificial joint? | 60. Yes No Contact lenses? |

V. ARE YOU TAKING:

- | | |
|---|---------------------------------|
| 61. Yes No Recreational drugs? | 63. Yes No Tobacco in any form? |
| 62. Yes No Drugs, medications, over-the-counter medicines
(including Aspirin), natural remedies? | 64. Yes No Alcohol? |

Please list: _____

VI. WOMEN ONLY:

- | | |
|---|--|
| 65. Yes No Are you or could you be pregnant or nursing? | 66. Yes No Taking birth control pills? |
|---|--|

VII. ALL PATIENTS:

67. Yes No Do you have or have you had any other diseases or medical problems NOT listed on this form?
 If so, please explain: _____

To the best of my knowledge, I have answered every question completely and accurately. I will inform my dentist of any change in my health and/or medication.

Patient's signature: _____ Date: _____

RECALL REVIEW:

1. Patient's signature _____ Date: _____
2. Patient's signature _____ Date: _____
3. Patient's signature _____ Date: _____

The Health History is created and maintained by the University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, California.
 Support for the translation and dissemination of the Health Histories comes from MetLife Dental.

Figure 4-1. History Form in English. Shown here is the University of the Pacific Arthur A. Dugoni School of Dentistry's health history form in English.

MetLife

DOSSIER MÉDICAL
French

Pacific Dental School

Nom du patient/de la patiente : _____ No d'identification du patient : _____
 Date de naissance : _____

I. ENTOURER LA MENTION CORRESPONDANTE (laisser en blanc si la question n'est pas comprise) :

- | | | | |
|----|-----|-----|--|
| 1. | Oui | Non | Êtes-vous en général en bonne santé ? |
| 2. | Oui | Non | Votre état de santé a-t-il changé depuis l'année dernière ? |
| 3. | Oui | Non | Avez-vous été hospitalisé(e) ou avez-vous été gravement malade au cours des trois dernières années ? |
| | | | Si vous avez répondu OUI, pour quelle raison/maladie ? _____ |
| 4. | Oui | Non | Êtes-vous actuellement en traitement médical sur ordre d'un médecin ? Pour quelle maladie ? _____ |
| | | | Date du dernier examen médical _____ Date du dernier examen dentaire _____ |
| 5. | Oui | Non | Avez-vous eu des problèmes avec un traitement dentaire précédent ? |
| 6. | Oui | Non | Souffrez-vous actuellement ? |

II. AVEZ-VOUS DÉJÀ EU :

- | | | | | | | | |
|-----|-----|-----|---|-----|-----|-----|--|
| 7. | Oui | Non | Douleurs thoraciques (angine de poitrine) ? | 18. | Oui | Non | Vertiges ? |
| 8. | Oui | Non | Chevilles enflées ? | 19. | Oui | Non | Bourdonnement d'oreilles ? |
| 9. | Oui | Non | Essoufflement ? | 20. | Oui | Non | Maux de tête ? |
| 10. | Oui | Non | Perte de poids, fièvre, sueurs nocturnes, récemment ? | 21. | Oui | Non | Pertes de connaissance ? |
| 11. | Oui | Non | Toux persistante, toux sanglante ? | 22. | Oui | Non | Troubles de la vision ? |
| 12. | Oui | Non | Problèmes de saignements, contusions fréquentes ? | 23. | Oui | Non | Crises d'épilepsie ? |
| 13. | Oui | Non | Problèmes de sinus ? | 24. | Oui | Non | Soif excessive ? |
| 14. | Oui | Non | Difficultés à avaler ? | 25. | Oui | Non | Urination fréquente ? |
| 15. | Oui | Non | Diarrhées, constipation, sang dans les selles ? | 26. | Oui | Non | Xérostomie (bouche sèche) ? |
| 16. | Oui | Non | Vomissements fréquents, nausées ? | 27. | Oui | Non | Jaunisse ? |
| 17. | Oui | Non | Difficultés à uriner, sang dans les urines ? | 28. | Oui | Non | Douleurs articulaires, raideur articulaire ? |

III. AVEZ-VOUS ACTUELLEMENT OU AVEZ-VOUS EU :

- | | | | | | | | |
|-----|-----|-----|--|-----|-----|-----|--------------------------------------|
| 29. | Oui | Non | Maladie du cœur ? | 40. | Oui | Non | SIDA ? |
| 30. | Oui | Non | Crise cardiaque, malformations cardiaques ? | 41. | Oui | Non | Tumeurs, cancer ? |
| 31. | Oui | Non | Souffles au cœur ? | 42. | Oui | Non | Arthrite, rhumatismes ? |
| 32. | Oui | Non | Rhumatisme articulaire aigu ? | 43. | Oui | Non | Maladies oculaires ? |
| 33. | Oui | Non | Accident vasculaire cérébral, durcissement des artères ? | 44. | Oui | Non | Maladies de peau ? |
| 34. | Oui | Non | Hypertension ? | 45. | Oui | Non | Anémie ? |
| 35. | Oui | Non | Asthme, tuberculose, emphysème pulmonaire, autres maladies pulmonaires ? | 46. | Oui | Non | MST (syphilis ou blennorragie) ? |
| | | | | 47. | Oui | Non | Herpès ? |
| 36. | Oui | Non | Hépatite, autres maladies du foie ? | 48. | Oui | Non | Maladies rénales, de la vessie ? |
| 37. | Oui | Non | Problèmes d'estomac, ulcères ? | 49. | Oui | Non | Maladies thyroïdiennes, surrénales ? |
| 38. | Oui | Non | Allergies : médicaments, aliments, produits médicaux, latex ? | 50. | Oui | Non | Diabète ? |
| 39. | Oui | Non | Antécédents familiaux de diabète, problèmes cardiaques, tumeurs ? | | | | |

IV. AVEZ-VOUS ACTUELLEMENT OU AVEZ-VOUS EU :

- | | | | | | | | |
|-----|-----|-----|-----------------------------|-----|-----|-----|-------------------------------------|
| 51. | Oui | Non | Soins psychiatriques ? | 56. | Oui | Non | Hospitalisation ? |
| 52. | Oui | Non | Radiothérapie ? | 57. | Oui | Non | Transfusions sanguines ? |
| 53. | Oui | Non | Chimiothérapie ? | 58. | Oui | Non | Opérations chirurgicales ? |
| 54. | Oui | Non | Valvule prothétique ? | 59. | Oui | Non | Stimulateur cardiaque (Pacemaker) ? |
| 55. | Oui | Non | Articulation artificielle ? | 60. | Oui | Non | Lentilles de contact ? |

V. CONSOMMEZ-VOUS ACTUELLEMENT :

- | | | | | | | | |
|-----|-----|-----|--|-----|-----|-----|----------------------------------|
| 61. | Oui | Non | Drogues à usage récréatif ? | 63. | Oui | Non | Tabac (sous toutes ses formes) ? |
| 62. | Oui | Non | Médicaments sur prescription, des médicaments obtenus sans ordonnance médicale (dont l'Aspirine), des remèdes naturels ? | 64. | Oui | Non | Alcool ? |

Veuillez indiquer : _____

VI. POUR LES FEMMES UNIQUEMENT :

- | | | | | | | | |
|-----|-----|-----|--|-----|-----|-----|---|
| 65. | Oui | Non | Êtes-vous actuellement ou pourriez-vous être enceinte ou allaitez-vous ? | 66. | Oui | Non | Prenez-vous actuellement des pilules contraceptives ? |
|-----|-----|-----|--|-----|-----|-----|---|

VII. TOUS PATIENTS :

- | | | | |
|---|-----|-----|---|
| 67. | Oui | Non | Avez-vous actuellement ou avez-vous eu toute autre maladie ou tout autre problème médical NON indiqué sur ce formulaire ? |
| Si tel est le cas, veuillez expliquer : _____ | | | |

Je soussigné(e), déclare avoir répondu à chaque question le plus complètement et précisément possible, dans la mesure de mes connaissances. Je m'engage à informer mon dentiste de tout changement dans mon état de santé et (ou) de toute prise de médicaments.

Signature du patient/de la patiente : _____ Date : _____

REVUE DE RAPPEL :

- | | | | |
|----|-------------------------------------|-------|--------------|
| 1. | Signature du patient/de la patiente | _____ | Date : _____ |
| 2. | Signature du patient/de la patiente | _____ | Date : _____ |
| 3. | Signature du patient/de la patiente | _____ | Date : _____ |

The Health History is created and maintained by the University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, California. Support for the translation and dissemination of the Health Histories comes from MetLife Dental.

Figure 4-2. History Form in French. Shown here is the University of the Pacific (UOP) Dental School's health history form in French. The University of the Pacific Arthur A. Dugoni School of Dentistry's health history form in English was translated, keeping the same question numbering sequence so that a clinician can compare the English health history with the patient's translated health history.

MetLife

健康記錄

Chinese

Pacific Dental School

姓名: _____

病人身份號碼: _____

出生日期: _____

I. 選擇適當答案 (若不知道請留空):

- | | | |
|-----------------------------------|---|---------------------------|
| 1. 是 | 否 | 您的健康是否良好? |
| 2. 是 | 否 | 過去一年您的健康有沒有改變? |
| 3. 是 | 否 | 過去三年有沒有住院或患重病? |
| 如果有, 什麼原因? _____ | | |
| 4. 是 | 否 | 您現在是否在接受醫生治療? 什麼原因? _____ |
| 上次全身檢查是何時: _____ 上次牙科檢查是何時: _____ | | |
| 5. 是 | 否 | 牙齒治療之後是否有過問題? |
| 6. 是 | 否 | 您現在有無痛楚? |

II. 您曾否有下列症狀或疾病:

- | | | | | | |
|-------|---|-----------------|-------|---|-----------|
| 7. 是 | 否 | 胸痛 (狹心病)? | 18. 是 | 否 | 頭暈? |
| 8. 是 | 否 | 腳踝腫? | 19. 是 | 否 | 耳鳴? |
| 9. 是 | 否 | 呼吸急促? | 20. 是 | 否 | 頭痛? |
| 10. 是 | 否 | 最近體重減輕, 發燒, 夜汗? | 21. 是 | 否 | 暈眩? |
| 11. 是 | 否 | 咳嗽, 咳血? | 22. 是 | 否 | 眼花? |
| 12. 是 | 否 | 流血問題, 容易發瘀? | 23. 是 | 否 | 癲癇 (羊癲瘋)? |
| 13. 是 | 否 | 鼻竇問題? | 24. 是 | 否 | 極度口渴? |
| 14. 是 | 否 | 吞食問題? | 25. 是 | 否 | 尿頻? |
| 15. 是 | 否 | 腹瀉, 便秘, 便血? | 26. 是 | 否 | 口乾? |
| 16. 是 | 否 | 嘔吐, 噁心? | 27. 是 | 否 | 黃膽? |
| 17. 是 | 否 | 小便困難, 尿血? | 28. 是 | 否 | 關節疼痛, 僵硬? |

III. 您現在或過去是否有下列疾病:

- | | | | | | |
|-------|---|--------------------|-------|---|-------------|
| 29. 是 | 否 | 心臟衰弱? | 40. 是 | 否 | 愛滋病? |
| 30. 是 | 否 | 心臟病發作, 心臟有缺陷? | 41. 是 | 否 | 腫瘤? 癌症? |
| 31. 是 | 否 | 心雜音? | 42. 是 | 否 | 風濕性關節炎? |
| 32. 是 | 否 | 風濕熱? | 43. 是 | 否 | 眼病? |
| 33. 是 | 否 | 中風, 血管硬化? | 44. 是 | 否 | 皮膚病? |
| 34. 是 | 否 | 高血壓? | 45. 是 | 否 | 貧血? |
| 35. 是 | 否 | 哮喘、肺結核、肺氣腫或其他肺疾病? | 46. 是 | 否 | 性病 (梅毒、淋病)? |
| 36. 是 | 否 | 肝炎或其他肝病? | 47. 是 | 否 | 皰疹? |
| 37. 是 | 否 | 胃病 (潰瘍)? | 48. 是 | 否 | 腎病、膀胱病? |
| 38. 是 | 否 | 食物、藥物或橡膠製品過敏? | 49. 是 | 否 | 甲狀腺、腎上腺病? |
| 39. 是 | 否 | 家族中有無糖尿病、心臟病、腫瘤病史? | 50. 是 | 否 | 糖尿病? |

IV. 您現在或過去是否有下列的疾病或治療:

- | | | | | | |
|-------|---|---------|-------|---|--------|
| 51. 是 | 否 | 精神病治療? | 56. 是 | 否 | 住院? |
| 52. 是 | 否 | 放射性治療? | 57. 是 | 否 | 輸血? |
| 53. 是 | 否 | 化學治療? | 58. 是 | 否 | 手術? |
| 54. 是 | 否 | 人工心臟瓣膜? | 59. 是 | 否 | 心律調節器? |
| 55. 是 | 否 | 人工關節? | 60. 是 | 否 | 隱形眼鏡? |

V. 您現在是否服用:

- | | | | | | |
|-------|---|-----------------------------|-------|---|---------------|
| 61. 是 | 否 | 迷幻藥? | 63. 是 | 否 | 香煙、雪茄或其他煙草製品? |
| 62. 是 | 否 | 處方藥品、一般藥品 (包括: 阿司匹林) 或天然藥材? | 64. 是 | 否 | 飲酒? |

請說明: _____

VI. 只限女士們:

- | | | | | | |
|-------|---|--------------------|-------|---|-------|
| 65. 是 | 否 | 您是否現在懷孕或哺乳, 或可能懷孕? | 66. 是 | 否 | 服避孕藥? |
|-------|---|--------------------|-------|---|-------|

VII. 所有病者:

- | | | |
|-------|---|-------------------------|
| 67. 是 | 否 | 您現在或以前是否有任何本表格中沒有列出的病症? |
|-------|---|-------------------------|

請說明: _____

我已經盡我所知完整及準確地回答上述每一個問題。若有任何身體狀況或服藥方面的變化, 我將通知我的牙科醫生。

簽名: _____ 日期: _____

覆診:

1. 簽名: _____ 日期: _____

2. 簽名: _____ 日期: _____

3. 簽名: _____ 日期: _____

The Health History is created and maintained by the University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, California.
Support for the translation and dissemination of the Health Histories comes from MetLife Dental.

Figure 4-3. History Form in Chinese. Shown here is the University of the Pacific (UOP) Dental School's health history form in Chinese. The University of the Pacific Arthur A. Dugoni School of Dentistry's health history form in English was translated, keeping the same question numbering sequence so that a clinician can compare the English health history with the patient's translated health history.

MetLife

تاریخچه تندرستی
Farsi

Pacific Dental School

نام بیمار: _____ شماره شناسایی بیمار: _____
تاریخ تولد: _____

I. دور جواب درست دایره بکشید. (اگر سوالی را متوجه نمی‌شوید جایش را خالی بگذارید):

1. به خیر آیا از سلامت کامل برخوردارید؟
2. به خیر آیا در یک سال اخیر تغییری در سلامتی شما حاصل شده است؟
3. به خیر آیا در سه سال اخیر به علت بیماری مهمی در بیمارستان بستری شده اید؟

چرا؟ _____

4. به خیر آیا در حال حاضر تحت نظر پزشکی هستید؟ به چه عنوان؟ _____

تاریخ آخرین معاینه پزشکی _____ تاریخ آخرین معاینه دندانپزشکی _____

5. به خیر آیا با معالجات گذشته دندانپزشکی مشکل داشته اید؟
6. به خیر آیا در حال حاضر درد دارید؟

II. آیا تجربه کرده اید:

7. به خیر درد سینۀ (آنزین)؟
8. به خیر تورم مچ پا؟
9. به خیر نفس تنگی؟
10. به خیر کاهش وزن، تب، عرق کردن هنگام شب؟
11. به خیر سرفه پی در پی، سرفه توام با خون؟
12. به خیر خونی زردی، کیود شدن سریع؟
13. به خیر بیماری سینوس؟
14. به خیر اشکال در بلعیدن؟
15. به خیر اسهال، یبوست، خون در مدفوع؟
16. به خیر استفراغ مکرر، حالت تهوع؟
17. به خیر به سختی ادرار کردن، خون در ادرار؟

III. آیا شما دارید یا داشته اید:

29. به خیر بیماری قلبی؟
30. به خیر سکتۀ قلبی، نقص قلبی؟
31. به خیر صدا های غیر طبیعی قلب؟
32. به خیر تب روماتیسم؟
33. به خیر حمله قلبی، سخت شدن سرخ رگها؟
34. به خیر فشار خون بالا؟
35. به خیر اسم، سل، امفیزم، دیگر بیماریهای ریه؟
36. به خیر هپاتیت، دیگر بیماریهای کبد؟
37. به خیر مشکلات معده، زخم معده؟
38. به خیر آلرژی (حساسیت) به دوا، غذا، دارو، شیرگیاهی؟
39. به خیر تاریخچه خانوادگی از نظر مرض قند، قلب، غدد؟

IV. آیا شما دارید یا داشته اید:

51. به خیر معالجه روانپزشکی؟
52. به خیر معالجات اشعه ای؟
53. به خیر شیمی درمانی؟
54. به خیر دریچه مصنوعی قلب؟
55. به خیر مفصل مصنوعی؟

V. آیا شما استفاده می کنید:

61. به خیر مواد تفریحی (مواد مخدر)؟
62. به خیر دارو با نسخه، بدون نسخه (آسپرین)، مواد مخدر، داروهای طبیعی

لطفاً موارد بالا را لیست کنید _____

VI. خاصها فقط:

65. به خیر آیا شما باردار هستید یا می‌توانید باردار باشید و یا کودکی را شیر می‌دهید؟
66. به خیر آیا شما قرص جلوگیری از حاملگی استفاده می‌کنید؟

VII. برای تمام بیماران:

67. به خیر آیا شما هر نوع بیماری یا مشکلات دیگر پزشکی که در این فرم ذکر نشده است دارید یا داشته اید؟

اگر چنین است لطفاً توضیح بدهید: _____

من تمام سؤالات را کاملاً و دقیقاً جواب داده ام. من دندانپزشکم را از هر گونه تغییراتی در سلامتی خویش یا مصرف دارو مطلع خواهم کرد.

امضاء بیمار: _____ تاریخ: _____
مراجع مجدد: _____ تاریخ: _____
1. امضاء بیمار: _____ تاریخ: _____
2. امضاء بیمار: _____ تاریخ: _____
3. امضاء بیمار: _____ تاریخ: _____

The Health History is created and maintained by the University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, California.
Support for the translation and dissemination of the Health Histories comes from MetLife Dental.

Figure 4-4. History Form in Farsi. Shown here is the University of the Pacific (UOP) Dental School's health history form in Farsi. The University of the Pacific Arthur A. Dugoni School of Dentistry's health history form in English was translated, keeping the same question numbering sequence so that a clinician can compare the English health history with the patient's translated health history.

PLAN FOR MEDICAL HISTORY ASSESSMENT

To conduct a thorough medical history assessment, the dental health care provider must have a methodical plan for information gathering and review. The plan should prevent oversights or omissions of important information about the patient's medical history. This section describes a methodical plan for conducting the thorough medical history assessment required for safe patient treatment. The main steps in conducting a medical history assessment are (a) information gathering and (b) determination of medical risk.

The goal of the medical history assessment is to obtain the most complete information about the patient's past and present history of medical conditions and diseases possible, including prescription medications. One successful approach for obtaining information is to combine the use of a written questionnaire, completed by the patient, with an interview of the patient. The interview provides an opportunity to clarify information and ask follow-up questions about information on the written questionnaire.

Information Gathering

The **information-gathering phase** of a patient's medical history involves:

- **Thorough reading.** Carefully read every line and every check box on the history form completed by the patient.
- **Prioritize.** Determine if the patient is in pain. If the patient is in pain, remember that alleviating pain takes precedence over other dental treatment.
- **Research conditions.** Research medical conditions and diseases.
- **Research drugs.** Research medications—prescription or over-the-counter.
- **Formulate questions.** Formulate questions to ask the patient during the medical history interview.
- **Interview.** After a thorough review of the health history form, the clinician should interview the patient. In order to acquire a comprehensive picture of the patient's health and medications, the clinician asks questions to clarify information on the form and to obtain additional information.
- **Consult.** Determine the need for a physician consultation.

Medical Alert Box

Medical conditions/diseases or medications that necessitate modifications or special precautions should be clearly marked in the **Medical Alert Box** on the patient record (Box 4-2).

Box 4-2. Contents of Medical Alert Box

- Any medical condition or disease that will alter dental treatment
- Any medical condition or disease that will alter drugs used during dental treatment or prescribed for the patient to treat dental conditions
- Any medical condition or disease that places the patient at risk for medical emergency during dental treatment
- Any medical condition or disease that could result in a postoperative complication

DETERMINATION OF MEDICAL RISK

At this stage, the dental health care provider must consider the patient's medical risk when undergoing dental treatment. The information gathered from the patient, along with the clinician's research on the patient's medical conditions, diseases, and medications, are used to determine the need for precautionary measures before or during dental treatment.

ASA PHYSICAL STATUS

In addition to the clinician's thorough review of the patient's written health questionnaire and research, another helpful resource for determining the patient's level of medical risk during dental treatment is the [American Society of Anesthesiologists \(ASA\) Physical Status Classification System](#). [1,2] The American Society of Anesthesiologists is one of the pioneers in the field of patient safety in medicine.

TABLE 4-1. ASA Physical Status Implications for Dental Treatment

ASA Classification		Modifications for Safe Patient Care
ASA 1	A normal healthy patient with little or no anxiety about dental treatment	- Green flag for dental treatment - No treatment modifications
ASA 2	- A patient with mild systemic disease - ASA 1 patients who are anxious or fearful of dental treatment - Examples: well-controlled diabetes, epilepsy, asthma	- Yellow flag for dental treatment - Employ stress-reduction strategies*
ASA 3	- A patient with severe systemic disease that limits activity - Examples: angina, stroke, heart attack, congestive heart failure	- Yellow flag for dental treatment - Employ stress-reduction strategies* - Treatment modifications needed, such as antibiotic premedication.
ASA 4	- A patient with severe systemic disease that is a constant threat to life - Examples: heart attack or stroke within the last 6 months	- Red flag for dental treatment - Elective dental care should be postponed until patient's medical condition has improved to at least an ASA 3 classification. - Emergency dental care in hospital dentistry setting.

* Refer to Box 4-3.

CONSULTATION WITH A PHYSICIAN

If all questions are not completely answered through research and the patient interview, or if there is any question or doubt in making the best decisions, consulting with the patient's physician is necessary. A consultation is simply a request for additional information and/or advice about the medical implications of oral health care treatment. A written request and reply is ideal, since there is no doubt about either the question or the answer (Fig. 4-5A–B).

1. **Request in writing.** A consultation request may be faxed to the physician to expedite the process. The request should be specific, concise, and directly to the point, therefore, a form may be used to standardize and simplify the written request and physician's reply. All consultation requests should clearly indicate the following:
 - a. Medical condition or disease of concern
 - b. An explanation of the planned dental treatment and the likely systemic consequences
 - c. A request for additional information and/or the physician's professional opinion
 - d. The patient's signature authorizing the release of information, the dentist's signature, and the dental office's address, phone number, and fax number
 - e. **Consult should be in triplicate.** One copy is kept in the patient's chart, one copy is given to the patient for his or her records, and one is sent or faxed to the physician.
2. **Explain planned treatment.** When consulting with a physician, it is important to remember that the physician is a medical expert who may have little or no knowledge regarding dental treatment procedures and how these procedures may relate to the patient's medical health.
3. **Outline procedures.** When explaining the planned treatment to the physician it is important to outline the procedures planned, length of time for each appointment, what surgical procedures will be done—including periodontal debridement (scaling and root planing)—the amount of anticipated blood loss, possible complications, if any, and medications or anesthetics that will be used.
3. **Obtain patient consent.** Before contacting a patient's physician, the **patient must grant written consent** for the physician to release information about the patient's medical findings.
4. **Meet legal requirements.** Telephone consultations are not acceptable from a legal standpoint. If a consultation is conducted by telephone, request that the physician provide the information in writing by mail or fax.

Medical Consultation Request

To Dr: <u>SAMUEL SNEED</u> <u>620 MARKET STREET</u> <u>ASHEVILLE, NC 28801</u> RE: <u>MR. ALAN ASCARI</u> <u>46 MAILSTRUM DRIVE</u> <u>ARDEN, NC 28751</u> Date of Birth: _____	Date <u>2/05/XX</u> Please complete the form below and return to: Dr: <u>MARK STEWART, DMD</u> <u>1625 POPLAR DRIVE, SUITE 10</u> <u>ASHEVILLE, NC 28801</u> Phone: <u>(828) 555-9856</u> Fax #: <u>(828) 555-9854</u>
---	--

Dear Dr: SNEED

The above named patient has presented with the following medical problem(s): _____

☐ Adrenal insufficiency or steroid therapy ☐ Anemia ☐ Anticoagulant therapy ☐ Bleeding disorder ☐ Cardiovascular disease ☐ Chemotherapy ☒ Diabetes ☐ Drug allergies ☐ Endocarditis ☐ Heart murmur ☐ Hepatitis ☐ HIV ☐ Hypertension ☐ Liver disease	☐ Leukemia ☐ Mitral valve prolapse ☐ Pacemaker ☐ Prescription diet drugs ☐ Prosthetic heart valve ☐ Prosthetic joint ☐ Pulmonary disease ☐ Radiation therapy to head/neck ☐ Renal dialysis with shunts ☐ Renal disease ☐ Rheumatic heart disease ☐ Systemic lupus erythematosus ☐ Systemic-pulmonary artery shunt ☐ Other: _____
--	---

Treatment to be performed on this patient includes:

☒ Oral surgical procedures ☐ Extractions ☐ Endodontic treatment (root canal) ☐ Deep scaling (with some removal of epithelial tissue) ☐ Dental radiographs (x-rays) ☐ Use of magnetostrictive ultrasonic devices	☐ Local anesthesia obtained with 2% Lidocaine, 1:100,000 epinephrine ☒ Local anesthesia epinephrine concentration may be increased to 1:50,000 for hemostasis, but will NOT exceed 0.2mg total
---	--

Most patients experience the following with the above planned procedures:

☐ Minimal bleeding with transient bacteria ☒ Prolonged bleeding Stress and anxiety: ☐ Low ☒ Moderate ☐ High Other: _____	☒ Appointment length: <u>2 HOURS</u> ☒ Number and frequency of appointments: <u>2 APPOINTMENTS AT 1 WEEK INTERVALS</u>
--	---

Dr. Mark Stewart
Dentist's Signature

2/05/XX
Date

Figure 4-5A. Sample Medical Consultation Request, Page 1. This form shows an example of page 1 of a completed medical consultant request for the fictitious patient, Alan Ascari. Page 2 of this request form is shown on the next page.

Medical Consultation Request, page 2

I agree to the release of my medical information to: DR. MARK STEWART

Alan Ascarì 2/05/XX

Patient's Signature Date

PHYSICIAN'S RESPONSE

Please provide any information regarding the above patient's:

- Need for antibiotic prophylaxis
- Current cardiovascular condition
- Coagulation therapy
- History and status of infectious disease

CHECK ALL THAT APPLY:

- ☐ OK to **PROCEED** with dental treatment with **NO** special precautions and **NO** prophylactic antibiotics.
- ☐ Antibiotic prophylaxis **IS** required for dental treatment according to the American Heart Association and/or the American Academy of Orthopedic Surgeons guidelines.
- ☐ **OTHER PRECAUTIONS** are required (please list): _____
- _____
- _____
- ☐ **DO NOT PROCEED** with dental treatment (please provide reason): _____
- _____
- _____
- ☐ **DELAY** treatment until this date: _____ (please provide reason): _____
- _____
- _____
- ☐ Patient **HAS** infectious disease (please circle):
- AIDS (please provide current lab results)
- TB (PPD+/active)
- Hepatitis, Type _____ (acute / carrier)
- Other (explain): _____
- _____
- ☐ Relevant medical and/or laboratory information is attached.

Physician's Signature Date

Figure 4-5B. Sample Medical Consultation Request, Page 2. The second page of a sample medical consultation form shows the patient's signature giving his or her physician permission to release medical information to the dental office. The remainder of the form is for the physician's response.

STRESS REDUCTION PROTOCOL FOR ANXIOUS PATIENTS

An upcoming dental appointment causes considerable anxiety and stress for some patients. For anxious patients, stress reduction strategies are recommended (Box 4-3).

Box 4-3. Strategies for Stress Reduction

- **Good Communication.** Use empathy and effective communication to establish trust and determine the cause(s) of the patient's anxiety.
- **Reduce Anxiety.** Premedicate as needed with an antianxiety medication for use (a) the night before the appointment to aid the patient in getting a good night's sleep and (b) the day of the appointment.
- **Scheduling.** Schedule appointments early in the day (so that patient will not have all day to worry about the upcoming treatment).
- **Suggestions for Patient.** Suggest that the patient eat a normal meal before the appointment and allow ample travel time to get to the dental office or clinic.
- **Length of Treatment.** Keep appointments short.
- **Pain Control.** Ensure good pain control before, during, and after the appointment, as appropriate, including the use of pain medications, local anesthesia, and/or nitrous oxide.

SECTION 2 PEAK PROCEDURE

Procedure 4-1. Review of Written Questionnaire and Patient Interview

ACTION	RATIONALE
1. Read through every line and check box. Are all the questions answered?	Complete information is important to protect the patient's health.
2. Can you understand what is written?	Make a note to ask the patient about anything that is not clear.
3. Did the patient sign and date the form?	The history must be signed and dated.
4. Circle YES responses in red pencil .	YES answers should be discussed during the interview.
5. Read through handwritten responses made by the patient. Circle concerns in red pencil.	Discuss concerns during the interview.
6. Research medical conditions and diseases, including: - Definition - Symptoms or manifestations - Treatments and medications - Systemic side effects that may necessitate treatment modifications - Oral manifestations - Impact on dental care	These are basic data that will be used to formulate questions for the patient and to determine if dental care involves any risks for the patient. Note: Common medical conditions and diseases may be researched by using the Ready References found in Module 5.
7. Identify risks to the patient's overall health, such as poorly controlled diabetes, obesity, periodontal disease, and tobacco use. Identify systemic factors that increase the risk of periodontal disease, such as tobacco use, poorly controlled diabetes, hormone alterations, psychosocial stress, and prescription medications. Circle concerns in red pencil.	- Dental health care providers should identify systemic health risks and promote wellness. - There is a connection between periodontitis and overall systemic health. Periodontal infection may contribute to the development of heart disease, premature/underweight babies, poorly controlled diabetes, and respiratory diseases. - Dental health care providers should be alert for systemic factors that may increase the risk of developing periodontal disease.

(continued)

Procedure 4-I. Review of Written Questionnaire and Patient Interview (continued)

ACTION	RATIONALE
8. Research the patient's medications, prescribed and nonprescription, including: - Drug use - Systemic side effects - Oral side effects - Dental treatment modifications or concerns Medications can be researched on the Internet, in drug reference books, and using the Ready References found in Module 5 of this book.	• It is important to determine why each medication is being taken. • Some patients are not knowledgeable about their medical conditions. In such cases, medications can be a valuable clue to the patient's health status. • Many medications have systemic side effects that may necessitate modifications to dental treatment. For example, many medications cause dizziness or orthostatic hypotension, thus, indicating that the clinician should adjust the chair position slowly. • Other medications have side effects that can alter a patient's dental health. Xerostomia, gingival overgrowth, and gingival bleeding are examples of oral side effects. • Some medications dictate modifications or precautions before, during, or after dental treatment. For example, Coumadin reduces the ability of the blood to clot.
9. Ask the patient questions about his or her medical conditions or diseases. Duration—When was the condition first diagnosed? Treatments and Procedures—What is being done to treat the condition? Episodes—What brings on the condition? What changes the severity?	• This factual information is important in determining if the patient can be treated safely. • Certain medical conditions and diseases have oral manifestations. • Certain medical conditions affect the health of the periodontium.
10. Ask the patient questions about the medications, prescription and over-the-counter, as well as any supplements that he or she is taking. - How long? Date started and ended - How much? Dosage	• This factual information is important in determining if the patient can be treated safely. • Certain medical conditions and diseases have oral manifestations.

SECTION 3 READY REFERENCES

NOTE: The Ready References in this book may be removed from the book by tearing along the perforated lines on each page. Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

Ready Reference 4-1. Internet Resources: Conditions/Diseases

The surest way to obtain the most current information on a medical condition, disease, or drug is by using the Internet.

- **Restricted Assess Sites.** Some college libraries subscribe to websites requiring a password. The instructional password allows access to reference books and scientific journals.
- **Public Access Sites.** There is a wealth of information on the Internet, however, that is free to the public. All the websites listed below allow public access without a password.
- **Help.** Refer to Ready Reference 2-1 in Module 2 for directions on how to search the Internet.

<http://medlineplus.gov/>

MEDLINE Plus has health information from the National Library of Medicine including information on diseases and conditions, drug information, and a medical encyclopedia.

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>

PubMed is the National Library of Medicine's free search service, which includes over 15 million citations for biomedical articles back to the 1950s. PubMed includes links to many sites and provides full text articles and other related resources.

<http://www.healthfinder.gov/library/>

The **Healthfinder** website, a service of the National Health Information Center, has a library of reliable health information. Information includes a guide to disease and conditions, medical dictionaries, and prescription drug information.

<http://www.mercksource.com>

The **Merck Source** website has health information on medical conditions and diseases. Click on the **Condition Guides** tab for resources on a wide variety of medical conditions. Click on **Resource Library** tab for medical dictionaries, the *Merck Manual Home Edition*, and the *PDR Family Guide To Over-The-Counter Drugs*.

http://www.medem.com/medlb/medlib_entry.cfm

The **Medem Network** website has a medical library. Look for the **For Patients** section of this page and click on **Medical Library**. The medical library link contains information on medical conditions.

http://my.webmd.com/webmd_today/home/default

The **WebMD Health** website has information on diseases and conditions and a medical library.

<http://www.mayoclinic.com/index.cfm>

The **Mayo Clinic** website has information on diseases and conditions.

Ready Reference 4-2. Internet Resources: Drug References

- **Help.** Refer to Ready Reference 2-1 in Module 2 for directions on how to search the Internet.

<http://www.nlm.nih.gov/medlineplus/druginformation.html>

MEDLINE Plus has information on thousands of prescription and over-the-counter medications.

<http://www.accessdata.fda.gov/scripts/cder/drugsatfda/>

U.S. Food and Drug Administration website provides a drug data base and a glossary.

<http://www.medicinenet.com/>

The **Medicine Net** website has information on medical conditions and medications.

http://www.pdrhealth.com/drug_info/rxdrugprofiles/alphaindexa.shtml

The **PDR®** Family Guide to Prescription Drugs.

<http://www.iherb.com/health.html>

The **iHerb** website has a link for herbs and supplements A–Z.

<http://www.drugs.com/>

Drugs.com provides drug information resources online. Fast, easy searching of over 24,000 approved medications.

<http://www.rxlist.com/top200a.htm>

RxList provides an Internet drug index.

Ready Reference 4-3. Glucose Blood Levels in Diabetes

TEST	GLUCOSE LEVELS
Hemoglobin A _{1C}	Goal for most people with diabetes = less than 7% High susceptibility to infection = above 8%
Finger-Stick Test	Glucose level at appointment time: • Acceptable = 80–120 mg/dL • Risk of infection = 180–300 mg/dL • Unacceptable = greater than 300 mg/dL

NOTE: The next module, **Module 5: Ready References: Medical History**, contains three ready references designed to provide fast access to commonly encountered medical conditions and prescriptions medications.

- Ready Reference 5-1: Common Conditions of Concern in Dentistry
- Ready Reference 5-2: Commonly Prescribed Drugs
- Ready Reference 5-3: Generic—Brand Name Cross Reference

MODULE REFERENCES AND SUGGESTED READINGS

MODULE REFERENCES

1. Aronson WL, McAuliffe MS, Miller K. Variability in the American Society of Anesthesiologists Physical Status Classification Scale. *AANA J* 2003;71:265–274.
2. Malamed SF, Robbins KS. *Medical Emergencies in the Dental Office*, 5th ed. St. Louis: Mosby; 2000:xii, 529.

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American Dental Association. *ADA Guide to Dental Therapeutics*. Chicago: American Dental Association; 2003.

Pickett F, Gurenlian J. *The Medical History: Clinical Implications and Emergency Prevention in Dental Settings*. Philadelphia: Lippincott Williams & Wilkins; 2005.

SUGGESTED READINGS

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SECTION 4 THE HUMAN ELEMENT

Box 4-4. Through the Eyes of a Student

It was my third week of clinic and I was feeling quite confident about medical history assessments. I started thinking that the lecture we had in clinic theory on assessing medical histories was very unrealistic. The example the instructor gave us was a patient on seven different drugs and three different diseases.

Well today was the day! The health history form seemed to have as many questions checked in the “Yes” column as the “No” column. I started to panic, thinking that it was going to take me all day to review the medical history and that the patient would be upset with me for taking so long. The patient was overweight, had diabetes, high blood pressure, and high cholesterol. She checked “yes” to chest pain on exertion, sleep disorder, and being out of breath. Her medications included several cardiac drugs, as well as insulin.

I began looking things up in a reference book when my instructor looked over my shoulder and asked me if I had ever heard of “Metabolic Syndrome.” I looked it up in a reference book. Suddenly all the “Yes” questions made sense. I felt I had a handle on the patient’s overall condition. That confidence allowed me to readily gather the rest of the information, link it together, and conduct the patient interview. It turned out to be a great appointment. My patient was so nice and I learned a lot about her and her health history.

Stephanie, student
Tallahassee Community College

TABLE 4-2. English to Spanish Phrase List for Medical History Assessment

Good morning (afternoon), Mr. _____.	Buenos días (tardes), señor _____.
Good morning (afternoon), Mrs. _____.	Buenos días (tardes), señora _____.
Good morning (afternoon), Miss _____.	Buenos días (tardes), señorita _____.
My name is _____. I am your dental hygienist.	Me llamo _____. Soy su higienista dental.
It is nice to meet you.	Mucho gusto en conocerlo (conocerla).
I do not speak Spanish, I will point to Spanish phrases.	No hablo español; Voy a indicar las frases en español.
Please follow me to the dental chair.	Por favor siga me a la silla dental.
Please turn to the right.	Por favor valla a la derecha.
Please turn to the left.	Por favor valla a la izquierda.
Please sit here in this chair.	Por favor siente se en esta silla.
You forgot to answer this question.	Se olvido responder esta pregunta.
Do you have your medications with you?	¿Tiene sus medicinas con usted?
Please bring your medications with you for your next appointment.	Por favor traiga sus medicinas con usted a su próxima cita.
Why do you take these medications?	¿Por que tome usted estos medicamentos?
Please sign here.	Por favor firme aquí.
We cannot do dental treatment until we consult with your doctor.	No podemos hacer un tratamiento hasta que consultemos con su doctor.
Wait here, I will get the dentist or instructor.	Espere aquí; voy a buscar el dentista o el profesor.
We are finished for today.	Hemos terminados por hoy.
We will schedule your next appointment.	Vamos hacer una nueva cita.
Goodbye, see you next time.	Hasta luego; La (Lo) veremos la próxima cita.

SECTION 5 PRACTICAL FOCUS—FICTITIOUS PATIENT CASES A–E

This section contains the medical history and medication list for five fictitious patients, Patients A–E. In addition, [Medical History Synopsis](#) and [Medical Consultation Request](#) forms are provided for Patients A–E.

DIRECTIONS:

- Remove the forms for Patients A–E from the book for ease of use.
- For each patient, follow the steps outlined below to conduct an assessment of the medical history and medications.

1. Review Health History

- Carefully read the patient's completed health history form.
- Circle all “yes” answers in red.
- Circle any unanswered questions.

2. Research Medical Conditions and Diseases

- Research all medical conditions and diseases.
- Start by locating the **Ready Reference 5-1: Common Conditions of Concern in Dentistry** found in **Module 5** of this book.
- As needed, conduct additional research. If a computer connected to the Internet is available, go online to locate additional information. If you do not have a computer, use oral medicine books to do additional research.

3. Research Medications—Prescription and Over-the-Counter

- Research all medications.
- Start by using **Ready Reference 5-2: Commonly Prescribed Drugs** found in **Module 5** of this book. **Ready Reference 5-3: Generic—Brand Name Cross Reference**, also located in **Module 5**, will be helpful in determining brand name equivalents of generic drugs.
- As needed, conduct additional research either on the Internet or using oral medicine reference books.

4. Summarize Information and Formulate Questions

- Complete the 2-page **Medical History Synopsis** form for each patient.
- At this point—after reviewing the patient's medical history, medications, and doing your research—do you have concerns about treating the patient?
- Do you think any modifications will need to be made in order to treat this patient safely?
- Make a list of follow-up questions that you should ask during the patient interview. Write your questions on page 2 of the **Medical History Synopsis** form.

5. Determine if a Medical Consultation is Needed

- For each patient, assess the need for a medical consultation. If needed, complete **Page 1 of the Medical Consultation Request**.

ADA American Dental Association
www.ada.org

Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:
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HEALTH HISTORY FORM

Name: **ASCARI ALAN A** Home Phone: **(828) 555-5432** Business Phone: ()
 Address: **46 MAILSTRUM DR.** City: **ARDEN** State: **NC** Zip Code: **28751**
 Occupation: **RETIRED ELECTRICAL ENGINEER** Height: **5'11"** Weight: **181** Date of Birth: **70 YRS** Sex: **M** ☒ **F** ☐
 SS#: **III-II-III** Emergency Contact: **ALICIA ASCARI** Relationship: **WIFE** Phone: **(828) 555-5432**

If you are completing this form for another person, what is your relationship to that person?

NAME RELATIONSHIP

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

	Yes	No	Don't Know	
Do your gums bleed when you brush?	☐	☒	☐	How would you describe your current dental problem? CHECK-UP
Have you ever had orthodontic (braces) treatment?	☐	☒	☐	Date of your last dental exam: 5 YEARS AGO
Are your teeth sensitive to cold, hot, sweets or pressure?	☒	☐	☐	Date of last dental x-rays: DON'T KNOW
Do you have earaches or neck pains?	☐	☒	☐	What was done at that time? CHECK-UP
Have you had any periodontal (gum) treatments?	☐	☒	☐	How do you feel about the appearance of your teeth? OK
Do you wear removable dental appliances?	☐	☒	☐	
Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐	
If yes, explain:				

MEDICAL INFORMATION

	Yes	No	Don't Know	
If you answer yes to any of the 3 items below, please stop and return this form to the receptionist.				Are you taking or have you recently taken any medicine(s) including non-prescription medicine? ☒ ☐ ☐
Have you had any of the following diseases or problems?				If yes, what medicine(s) are you taking? Prescribed: SEE LIST
Active Tuberculosis	☐	☒	☐	Over the counter:
Persistent cough greater than a 3 week duration	☐	☒	☐	Vitamins, natural or herbal preparations and/or diet supplements:
Cough that produces blood	☐	☒	☐	
Are you in good health?	☐	☐	☒	Are you taking, or have you taken, any diet drugs such as Pondimin (fenfluramine), Redux (dexphenfluramine) or phen-fen (fenfluramine-phentermine combination)? ☐ ☒ ☐
Has there been any change in your general health within the past year?	☐	☒	☐	Do you drink alcoholic beverages? ☐ ☒ ☐
Are you now under the care of a physician?	☒	☐	☐	If yes, how much alcohol did you drink in the last 24 hours? In the past week?
If yes, what is/are the condition(s) being treated?				Are you alcohol and/or drug dependent? ☐ ☒ ☐
DIABETES				If yes, have you received treatment? (circle one) Yes / No
Date of last physical examination: DON'T REMEMBER				Do you use drugs or other substances for recreational purposes? ☐ ☒ ☐
Physician: DR. SAMUEL SNEED (828) 555-2134				If yes, please list:
NAME 620 MARKET AVENUE PHONE ASHVILLE 28801				Frequency of use (daily, weekly, etc.):
ADDRESS CITY/STATE ZIP				Number of years of recreational drug use:
NAME PHONE				Do you use tobacco (smoking, snuff, chew)? ☒ ☐ ☐
ADDRESS CITY/STATE ZIP				If yes, how interested are you in stopping? (circle one) Very / Somewhat Not interested
Have you had any serious illness, operation, or been hospitalized in the past 5 years? ☒ ☐ ☐				Do you wear contact lenses? ☐ ☒ ☐
If yes, what was the illness or problem?				
TOO LITTLE INSULIN				

PLEASE COMPLETE BOTH SIDES

Figure 4-6A. Page 1 of the health history form for fictitious patient Mr. Ascari.
Page 2 of Mr. Ascari's history form is on the following page.

	Yes	No	Don't Know		Yes	No	Don't Know
Are you allergic to or have you had a reaction to?				Have you had an orthopedic total joint (hip, knee, elbow, finger) replacement?			
Local anesthetics	☐	☒	☐	If yes, when was this operation done?			
Aspirin	☐	☒	☐	If you answered yes to the above question, have you had any complications or difficulties with your prosthetic joint?			
Penicillin or other antibiotics	☐	☒	☐				
Barbiturates, sedatives, or sleeping pills	☐	☒	☐	Has a physician or previous dentist recommended that you take antibiotics prior to your dental treatment?	☐	☐	☒
Sulfa drugs	☐	☒	☐	If yes, what antibiotic and dose?			
Codeine or other narcotics	☐	☒	☐	Name of physician or dentist*:			
Latex	☐	☒	☐	Phone:			
Iodine	☐	☒	☐				
Hay fever/seasonal	☐	☒	☐				
Animals	☐	☒	☐				
Food (specify) _____	☐	☒	☐				
Other (specify) _____	☐	☒	☐				
Metals (specify) _____	☐	☒	☐				
To yes responses, specify type of reaction.				WOMEN ONLY			
				Are you or could you be pregnant?	☐	☐	☐
				Nursing?	☐	☐	☐
				Taking birth control pills or hormonal replacement?	☐	☐	☐
Please (X) a response to indicate if you have or have not had any of the following diseases or problems.							
	Yes	No	Don't Know		Yes	No	Don't Know
Abnormal bleeding	☐	☒	☐	Hemophilia	☐	☒	☐
AIDS or HIV infection	☐	☐	☐	Hepatitis, jaundice or liver disease	☐	☒	☐
Anemia	☐	☒	☐	Recurrent Infections	☐	☒	☐
Arthritis	☐	☒	☐	If yes, indicate type of infection: _____			
Rheumatoid arthritis	☐	☒	☐	Kidney problems	☐	☒	☐
Asthma	☐	☒	☐	Mental health disorders. If yes, specify: _____	☐	☒	☐
Blood transfusion. If yes, date: _____	☐	☐	☒	Malnutrition	☐	☒	☐
Cancer/Chemotherapy/Radiation Treatment	☐	☐	☒	Night sweats	☐	☒	☐
Cardiovascular disease. If yes, specify below:	☐	☒	☐	Neurological disorders. If yes, specify: _____	☐	☒	☐
___ Angina				Osteoporosis	☐	☒	☐
___ Heart murmur				Persistent swollen glands in neck	☐	☒	☐
___ Arteriosclerosis				Respiratory problems. If yes, specify below:	☐	☒	☐
___ Artificial heart valves				___ Emphysema			
___ Congenital heart defects				___ Bronchitis, etc.			
___ Congestive heart failure				Severe headaches/migraines	☐	☒	☐
___ Coronary artery disease				Severe or rapid weight loss	☐	☒	☐
___ Damaged heart valves				Sexually transmitted disease	☐	☒	☐
___ Heart attack				Sinus trouble	☐	☒	☐
Chest pain upon exertion	☐	☒	☐	Sleep disorder	☐	☒	☐
Chronic pain	☐	☒	☐	Sores or ulcers in the mouth	☒	☐	☐
Disease, drug, or radiation-induced immunosuppression	☐	☒	☐	Stroke	☐	☒	☐
Diabetes. If yes, specify below:	☒	☐	☐	Systemic lupus erythematosus	☐	☒	☐
___ Type I (Insulin dependent)				Tuberculosis	☐	☒	☐
___ Type II				Thyroid problems	☐	☒	☐
Dry Mouth	☒	☐	☐	Ulcers	☐	☒	☐
Eating disorder. If yes, specify: _____	☐	☒	☐	Excessive urination	☐	☒	☐
Epilepsy	☐	☒	☐	Do you have any disease, condition, or problem not listed above that you think I should know about?	☐	☒	☐
Fainting spells or seizures	☐	☒	☐	Please explain:			
Gastrointestinal disease	☐	☒	☐				
G.E							

Figure 4-6B. Page 2 of the health history form for fictitious patient Mr. Ascari.

Medication List

Patient ALAN ASCARI Date 1/15/XX

PRESCRIBED

HUMULIN R: ONE INJECTION TWICE A DAY

OVER-THE-COUNTER

DAYQUIL LIQUICAP
NYQUIL

VITAMINS, HERBS, DIET SUPPLEMENTS

CHROMIUM 100 MCG PER D
ALPHA LIPOIC ACID 200 MG PER DAY

Figure 4-7. Medication list for fictitious patient Mr. Ascari.

Medical History Synopsis: Part 2

Patient ALAN ASCARI Date 1/15/XX

Student or Clinician _____

PART 3: ADDITIONAL INFORMATION / CONSULTS

List any additional information that should be obtained before dental treatment can begin

PART 4: PATIENT INTERVIEW

Formulate a list of questions for the Patient Interview

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Figure 4-8B. Medical History Synopsis Part 2.

Medical Consultation Request

To Dr: _____

Date _____

Please complete the form below and return to:

Dr: _____

RE: _____

Phone: _____

Date of Birth: _____

Fax #: _____

Dear Dr: _____

The above named patient has presented with the following medical problem(s): _____

☐ Adrenal insufficiency or steroid therapy☐ Leukemia☐ Anemia☐ Mitral valve prolapse☐ Anticoagulant therapy☐ Pacemaker☐ Bleeding disorder☐ Prescription diet drugs☐ Cardiovascular disease☐ Prosthetic heart valve☐ Chemotherapy☐ Prosthetic joint☐ Diabetes☐ Pulmonary disease☐ Drug allergies☐ Radiation therapy to head/neck☐ Endocarditis☐ Renal dialysis with shunts☐ Heart murmur☐ Renal disease☐ Hepatitis☐ Rheumatic heart disease☐ HIV☐ Systemic lupus erythematosus☐ Hypertension☐ Systemic-pulmonary artery shunt☐ Liver disease☐ Other: _____

Treatment to be performed on this patient includes:

☐ Oral surgical procedures☐ Local anesthesia obtained with 2% Lidocaine,
1:100,000 epinephrine☐ Extractions☐ Local anesthesia epinephrine concentration may
be increased to 1:50,000 for hemostasis,
but will NOT exceed 0.2mg total☐ Endodontic treatment (root canal)☐ Deep scaling (with some removal of epithelial tissue)☐ Dental radiographs (x-rays)☐ Use of magnetostrictive ultrasonic devices

Most patients experience the following with the above planned procedures:

☐ Minimal bleeding with transient bacteria☐ Appointment length: _____☐ Prolonged bleeding☐ Number and frequency of appointments: _____☐ Stress and anxiety: ☐ Low ☐ Moderate ☐ High☐ Other: _____

Dentist's Signature _____

Date _____

Figure 4-9. Page I of Medical Consultation Request.

Child Health/Dental History Form

Patient's Name LAST <u>BIDDLE</u> FIRST <u>BETHANY</u> INITIAL <u>B</u>		Nickname <u>BETH</u>	Date of Birth <u>AGE 9</u>
Parent's/Guardian's Name <u>BRENDA BIDDLE</u>		Relationship to Patient <u>MOTHER</u>	
Address P.O. BOX OR MAILING ADDRESS <u>311 FIRST AVENUE</u> CITY <u>ARDEN</u> STATE <u>NC</u> ZIPCODE <u>28756</u>			
Phone HOME <u>(828) 555-6153</u>		WORK <u>(828) 555-4367</u>	Patient's Sex ☒ F ☐ M

Have you (the parent/guardian) or the patient had any of the following diseases or problems? ☐ Yes ☒ No
 1. Active Tuberculosis, 2. Persistent cough greater than a three-week duration, 3. Cough that produces blood?
 If you answer yes to any of the three items above, please stop and return this form to the receptionist.

Has the child had any history of, difficulty with, or diagnosis of any of the following:

- | | | | | | |
|---|--|--|---|--|---|
| ☐ Anemia | ☐ Cancer | ☐ Fainting | ☐ Immunizations | ☐ Mononucleosis | ☐ Thyroid |
| ☐ Arthritis | ☐ Cerebral Palsy | ☐ Growth Problems | ☐ Kidney | ☐ Mumps | ☐ Tobacco/Drug Use |
| ☒ Asthma | ☐ Chicken Pox | ☐ Hearing | ☒ Latex allergy | ☐ Pregnancy (teens) | ☐ Tuberculosis |
| ☐ Bladder | ☐ Chronic Sinusitis | ☐ Heart | ☐ Liver | ☐ Rheumatic fever | ☐ Venereal Disease |
| ☐ Bleeding disorders | ☐ Diabetes | ☐ Hepatitis | ☐ Mastoiditis | ☐ Seizures | ☐ Other _____ |
| ☐ Bones/Joints | ☐ Epilepsy | ☐ HIV +/AIDS | ☐ Measles | ☐ Sickle cell | |

Please list the name and phone number of the child's physician:

Name of Physician DR. MARY MERCER Phone (828) 555-2345

CHILD'S HISTORY

- | | Yes | No |
|---|-------------------------------------|-------------------------------------|
| 1. Is the child taking any medications at this time? If yes, please list: <u>SEE ATTACHED LIST</u> | ☒ | ☐ |
| 2. Is the child allergic to any medications, i.e. penicillin, antibiotics, or other drugs? If yes, please explain: <u>PENICILLIN</u> | ☒ | ☐ |
| 3. Is the child allergic to anything else, such as certain foods? If yes, please explain: <u>BANANAS AND FISH</u> | ☒ | ☐ |
| 4. How would you describe the child's eating habits? <u>GOOD</u> | ☐ | ☐ |
| 5. Has the child ever had a serious illness? If yes, when: <u>CURRENT</u> Please describe: <u>ASTHMA</u> | ☒ | ☐ |
| 6. Has the child ever been hospitalized? | ☒ | ☐ |
| 7. Does the child have a history of any other illnesses? If yes, please list: | ☐ | ☐ |
| 8. Has the child ever received a general anesthetic? | ☐ | ☒ |
| 9. Does the child have any inherited problems? | ☐ | ☒ |
| 10. Does the child have any speech difficulties? | ☐ | ☒ |
| 11. Has the child ever had a blood transfusion? | ☐ | ☒ |
| 12. Is the child physically, mentally, or emotionally impaired? | ☐ | ☒ |
| 13. Does the child experience excessive bleeding when cut? | ☐ | ☒ |
| 14. Is the child currently being treated for any illnesses? <u>ASTHMA</u> | ☒ | ☐ |
| 15. Is this the child's first visit to a dentist? If not the first visit, what was the date of the last dentist visit? Date: | ☒ | ☐ |
| 16. Has the child had any problem with dental treatment in the past? | ☐ | ☒ |
| 17. Has the child ever had dental radiographs (x-rays) exposed? | ☐ | ☒ |
| 18. Has the child ever suffered any injuries to the mouth, head or teeth? | ☐ | ☒ |
| 19. Has the child had any problems with the eruption or shedding of teeth? | ☐ | ☒ |
| 20. Has the child had any orthodontic treatment? | ☐ | ☒ |
| 21. What type of water does your child drink? ☒ City water ☐ Well water ☐ Bottled water | ☐ | ☒ |
| 22. Does the child take fluoride supplements? | ☐ | ☒ |
| 23. Is fluoride toothpaste used? | ☒ | ☐ |
| 24. How many times are the child's teeth brushed per day? <u>2</u> When are the teeth brushed? <u>AM, PM</u> | ☐ | ☒ |
| 25. Does the child suck his/her thumb, fingers or pacifier? | ☐ | ☒ |
| 26. At what age did the child stop bottle feeding? Age _____ Breast feeding? Age <u>1 YR.</u> | ☐ | ☒ |

NOTE: Both doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

Brenda Biddle

1/10/XX

Parent's/Guardian's Signature

Date

For completion by dentist

Comments on parent/guardian and patient interview concerning health history _____

Significant findings from questionnaire or oral interview _____

Dental management considerations _____

Signature of Dentist _____

Date _____

For Office Use Only: ☐ Medical Alert ☐ Premedication ☐ Allergies ☐ Anesthesia Reviewed by _____

Date _____

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Form S707

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or go online at www.adacatalog.org

Figure 4-10. Health History form for fictitious patient Bethany Biddle. The American Dental Association (ADA) **Child Health/Dental History** form is 1 page in length.

Medication List

Patient BETHANY BIDDLE Date 1/10/XX

PRESCRIBED

FLOVENT ROTADISK SOMCG: 1 INHALATION TWICE A DAY
SEREVENT DISCUS: 1 INHALATION TWICE A DAY
ZYRTEC CHEWABLE TABLETS: SMG THREE TIMES A DAY
VENTOLIN INHALER, WHEN NEEDED FOR ATTACK

OVER-THE-COUNTER

VITAMINS, HERBS, DIET SUPPLEMENTS

FLINTSTONES MULTIVITAMINS

Figure 4-11. Medication list for fictitious patient Bethany Biddle.

Medical History Synopsis: Part 1

Patient BETHANY BIDDLE Date 1/10/XX

Student or Clinician _____

PART 1: MEDICAL CONDITIONS, DISEASES, AND SURGERIES

Diseases, Conditions, Surgeries

Concerns for Dental Treatment

PART 2: MEDICATIONS - PRESCRIBED AND OTC

Medications

Concerns for Dental Treatment

Figure 4-12A. Medical History Synopsis Part 1.

Medical Consultation Request

To Dr: _____

Date _____

RE: _____

Please complete the form below and return to:

Dr: _____

Phone: _____

Date of Birth: _____

Fax #: _____

Dear Dr: _____

The above named patient has presented with the following medical problem(s): _____

____ Adrenal insufficiency or steroid therapy

____ Anemia

____ Anticoagulant therapy

____ Bleeding disorder

____ Cardiovascular disease

____ Chemotherapy

____ Diabetes

____ Drug allergies

____ Endocarditis

____ Heart murmur

____ Hepatitis

____ HIV

____ Hypertension

____ Liver disease

____ Leukemia

____ Mitral valve prolapse

____ Pacemaker

____ Prescription diet drugs

____ Prosthetic heart valve

____ Prosthetic joint

____ Pulmonary disease

____ Radiation therapy to head/neck

____ Renal dialysis with shunts

____ Renal disease

____ Rheumatic heart disease

____ Systemic lupus erythematosus

____ Systemic-pulmonary artery shunt

____ Other: _____

Treatment to be performed on this patient includes:

____ Oral surgical procedures

____ Extractions

____ Endodontic treatment (root canal)

____ Deep scaling (with some removal of epithelial tissue)

____ Dental radiographs (x-rays)

____ Use of magnetostrictive ultrasonic devices

____ Local anesthesia obtained with 2% Lidocaine,
1:100,000 epinephrine____ Local anesthesia epinephrine concentration may
be increased to 1:50,000 for hemostasis,
but will NOT exceed 0.2mg total

Most patients experience the following with the above planned procedures:

____ Minimal bleeding with transient bacteria

____ Prolonged bleeding

____ Stress and anxiety: ____ Low ____ Moderate ____ High

____ Other: _____

____ Appointment length: _____

____ Number and frequency of appointments: _____

Dentist's Signature _____

Date _____

Figure 4-13. Page I of Medical Consultation Request.

ADA American Dental Association www.ada.org	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Alerta Médica:</td> <td style="width: 15%;">Condición:</td> <td style="width: 15%;">Premedicación:</td> <td style="width: 15%;">Alergias:</td> <td style="width: 15%;">Anestesia:</td> <td style="width: 15%;">Fecha:</td> </tr> </table>	Alerta Médica:	Condición:	Premedicación:	Alergias:	Anestesia:	Fecha:
Alerta Médica:	Condición:	Premedicación:	Alergias:	Anestesia:	Fecha:		

FORMULARIO DE HISTORIA MÉDICA

Nombre: **CHAVEZ CARLOS C.** Tel. Res.: **(828) 555-7421** Tel. Trabajo: **(828) 555-3674**
 Dirección: **24 MILLER ST.** Ciudad: **ASHVILLE** Estado: **NC** Zona postal: **28801**
 Ocupación: **CONSTRUCCIÓN** Estructura: **5'6"** Peso: **150** Fecha de Nacimiento: **25 YRS** Sexo: M ☒ F ☐
 SS#: **III-II-III** Contacto en Emergencias: **MARIA CHAVEZ** Relación: **ESPOSA** Tel.: **(828) 555-7421**

Si está llenando este formulario por otra persona, ¿cuál es su relación con ésta?

NOMBRE RELACIÓN

En las preguntas siguientes marque con (X) lo que se aplique. Sus respuestas son sólo para nuestros expedientes y se mantendrán en confidencia de acuerdo con las leyes pertinentes. Favor de tener en cuenta que durante su primera visita se le harán más preguntas acerca de sus respuestas en este cuestionario y podrán hacerse preguntas adicionales acerca de su salud. Esta información es vital para poder proveerle el cuidado apropiado. Esta oficina no usa esta información para discriminar.

INFORMACIÓN DENTAL

¿Le sangran las encías al cepillarse? ☒ Sí ☐ No ☐ No sé ¿Ha recibido tratamiento de ortodoncia (frenos en los dientes)? ☐ Sí ☒ No ☐ No sé ¿Tiene los dientes sensitivos al frío, calor, dulce o presión? ☐ Sí ☒ No ☐ No sé ¿Tiene dolores de oído o de cuello? ☐ Sí ☒ No ☐ No sé ¿Ha recibido tratamiento periodontal (de las encías)? ☐ Sí ☒ No ☐ No sé ¿Usa aparatos (prótesis)dentales removibles? ☐ Sí ☒ No ☐ No sé ¿Ha tenido alguna dificultad seria asociada con cualquier tratamiento dental anteriormente? ☐ Sí ☐ No ☒ No sé Si es así, explique:	¿Cómo describiría el problema dental que tiene ahora? ENCÍAS (GUMS) Fecha de su último examen dental: HACE DOS AÑOS (2 YEARS AGO) Fecha de los últimos rayos X dentales: ? ¿Qué le hicieron esa vez? LIMPIADA (CLEANING) ¿Qué piensa acerca de la apariencia de sus dientes? MAL (POOR)
--	---

INFORMACIÓN MÉDICA

Si contesta que sí a cualquiera de las 3 siguientes, deténgase y lleve este formulario a la recepcionista. ¿Ha tenido alguna de las siguientes enfermedades o problemas? Tuberculosis activa ☐ Sí ☒ No ☐ No sé Tos persistente por más de tres semanas. ☐ Sí ☒ No ☐ No sé Tos que produce sangre ☐ Sí ☒ No ☐ No sé ¿Se encuentra en buena salud? ☒ Sí ☐ No ☐ No sé ¿Ha habido algún cambio en su salud general durante el pasado año? ☐ Sí ☒ No ☐ No sé ¿Está al presente bajo el cuidado de un médico? ☒ Sí ☐ No ☐ No sé Si es así, ¿qué condición(es) se está tratando? EPILEPSIA Fecha del último examen médico: HACE UN AÑO (1 YEAR AGO) Médico(s): DR. GIMBLE (828) 555-3689 NOMBRE: 26 FLORA AVENUE TELÉFONO: ASHVILLE DIRECCIÓN: CIUDAD/ESTADO ZONA POSTAL: 28801 NOMBRE: TELÉFONO: DIRECCIÓN: CIUDAD/ESTADO ZONA POSTAL: ¿Ha sufrido una enfermedad seria, una operación, o ha sido hospitalizado en los últimos 5 años? ☐ Sí ☒ No ☐ No sé Si es así, ¿cuál fue la enfermedad o el problema?	¿Está tomando o ha tomado recientemente alguna medicina incluyendo medicinas sin receta? ☒ Sí ☐ No ☐ No sé Si es así, ¿qué medicinas está tomando? De receta: VER LISTA ADJUNTA (SEE ATTACHED LIST) Sin receta: Vitaminas, preparaciones naturales o hierbas medicinales, suplementos dietéticos: ¿Está tomando o ha tomado alguna medicina para rebajar de peso como Pondimin (fenfluramina), Redux (dexfenfluramina) o fen-fen (fenfluramina-fentermina)? ☐ Sí ☒ No ☐ No sé ¿Toma bebidas alcohólicas? ☒ Sí ☐ No ☐ No sé Si es así, ¿cuánto alcohol tomó en la últimas 24 horas? 1 CERVEZA (BEER) ¿En la última semana? 4 CERVESAS (BEERS) ¿Tiene dependencia del alcohol o de las drogas? ☐ Sí ☒ No ☐ No sé Si es así, ¿ha recibido tratamiento? (Marque una.) Sí / No ¿Usa drogas u otra sustancia con fines recreativos? ☐ Sí ☒ No ☐ No sé Si es así, enumere: Frecuencia de uso (diario, semanal, etc.): # de años de uso recreativo de drogas: ¿Usa tabaco (fuma, rapé, masca)? ☐ Sí ☒ No ☐ No sé Si es así, ¿cuán interesado está en cesar? (marque uno) Muy interesado / Algo / No tengo interés ¿Usa lentes de contacto? ☐ Sí ☒ No ☐ No sé
--	--

FAVOR DE CONTESTAR AMBOS LADOS

Figure 4-14A. Page 1 of the health history form for fictitious patient Mr. Chavez.

	Sí	No	No sé		Sí	No	No sé
--	-----------	-----------	--------------	--	-----------	-----------	--------------

¿Es alérgico o ha tenido alguna reacción a:

Anestésicos locales	☐	☒	☐
Aspirina	☐	☒	☐
Penicilina u otros antibióticos	☐	☒	☐
Barbitúricos, sedantes, o píldoras para dormir	☐	☒	☐
Medicinas de sulfá	☐	☒	☐
Codeína u otros narcóticos	☐	☒	☐
Látex	☐	☒	☐
Yodo	☐	☒	☐
Fiebre del heno/en temporada	☐	☒	☐
Animales	☐	☒	☐
Alimentos (especifique) _____	☐	☒	☐
Otros (especifique) _____	☐	☒	☐
Metales (especifique) _____	☐	☒	☐

Donde conteste que sí, especifique el tipo de reacción.

PARA LAS MUJERES SOLAMENTE

¿Está o puede estar embarazada? ☐ ☐ ☐

¿Está lactando? ☐ ☐ ☐

¿Está tomando píldoras anticonceptivas o de reemplazo hormonal? ☐ ☐ ☐

Favor de marcar con (X) si ha tenido o no cualquiera de las siguientes enfermedades o problemas.

	Sí	No	No sé		Sí	No	No sé
--	-----------	-----------	--------------	--	-----------	-----------	--------------

Sangría anormal	☐	☒	☐	Hepatitis, ictericia, o enfermedad del hígado	☐	☒	☐
SIDA o infección por VIH	☐	☒	☐	Infecciones recurrentes	☐	☒	☐
Anemia	☐	☒	☐	Indique el tipo de infección: _____	☐	☒	☐
Artritis	☐	☒	☐	Problemas del riñón	☐	☒	☐
Artritis reumatoidea	☐	☒	☐	Trastornos de la salud mental.	☐	☒	☐
Asma	☐	☒	☐	Si marca sí, especifique: _____	☐	☒	☐
Transfusión de sangre. Si marca sí, fecha: _____	☐	☒	☐	Desnutrición	☐	☒	☐
Cáncer/quimioterapia/tratamiento de radiación	☐	☒	☐	Sudores nocturnos	☐	☒	☐
Enfermedad cardiovascular. Si marca sí, especifique abajo:	☐	☒	☐	Trastornos neurológicos. Si marca sí, especifique: _____	☐	☒	☐
___ Angina		☒		Osteoporosis	☐	☒	☐
___ Soplo en el corazón		☒		Glándulas del cuello hinchadas persistentes	☐	☒	☐
___ Arteriosclerosis		☒		Problemas respiratorios. Si marca sí, especifique abajo:	☐	☒	☐
___ Válvulas artificiales en el corazón		☒		___ Enfisema		☒	
___ Defectos congénitos del corazón		☒		___ Bronquitis, etc.		☒	
___ Insuficiencia cardíaca		☒					
___ Enfermedad de las arterias coronarias		☒		Dolores de cabeza severos/migrañas	☒	☐	☐
___ Válvulas del corazón dañadas		☒		Pérdida de peso severa o rápida	☐	☒	☐
___ Ataque del corazón		☒		Enfermedad sexualmente transmitida	☐	☒	☐
				Sinusitis u otros problemas	☐	☒	☐
Dolor en el pecho al esforzarse	☐	☒	☐	Trastornos del sueño	☐	☒	☐
Dolor crónico	☐	☒	☐	Úlceras en la boca	☒	☐	☐
Inmunosupresión inducida por enfermedad, drogas o radiación	☐	☒	☐	Ataque cerebral	☐	☒	☐
Diabetes. Si marca sí, especifique abajo:	☐	☒	☐	Lupus eritematoso sistémico	☐	☒	☐
___ Tipo I (dependiente de insulina)		☒		Tuberculosis	☐	☒	☐
___ Tipo II		☒		Problemas de las tiroides	☐	☒	☐
Boca seca	☐	☒	☐	Úlceras	☐	☒	☐
Trastornos alimenticios. Si marca sí, especifique: _____	☐	☒	☐	Micción (orinar) excesiva	☐	☒	☐
Epilepsia	☒	☐	☐				
Desmayos o ataques	☐	☒	☐	¿Tiene alguna enfermedad, condición o problema que no aparezca en la lista, que cree que debo saber?	☐	☒	☐
Enfermedad gastrointestinal	☐	☒	☐	Explique por favor: _____			
Reflujo gastrointestinal/acidez persistente	<						

Figure 4-14B. Page 2 of the health history form for fictitious patient Mr. Chavez.

Medication List	
Patient	CARLOS CHAVEZ
Date	1/05/XX
PRESCRIBED	
PHENYTOIN 100MG THREE TIMES A DAY	
OVER-THE-COUNTER	
ASPIRIN FOR STRAINED MUSCLE IN BACK	
VITAMINS, HERBS, DIET SUPPLEMENTS	

Figure 4-15. Medication list for fictitious patient Mr. Chavez.

Medical History Synopsis: Part 1

Patient CARLOS CHAVEZ Date 1/05/XX

Student or Clinician _____

PART 1: MEDICAL CONDITIONS, DISEASES, AND SURGERIES

Diseases, Conditions, Surgeries

Concerns for Dental Treatment

PART 2: MEDICATIONS - PRESCRIBED AND OTC

Medications

Concerns for Dental Treatment

Figure 4-16A. Medical History Synopsis Part 1.

Medical Consultation Request

To Dr: _____

Date _____

Please complete the form below and return to:

Dr: _____

RE: _____

Phone: _____

Date of Birth: _____

Fax #: _____

Dear Dr: _____

The above named patient has presented with the following medical problem(s): _____

_____ Adrenal insufficiency or steroid therapy

_____ Leukemia

_____ Anemia

_____ Mitral valve prolapse

_____ Anticoagulant therapy

_____ Pacemaker

_____ Bleeding disorder

_____ Prescription diet drugs

_____ Cardiovascular disease

_____ Prosthetic heart valve

_____ Chemotherapy

_____ Prosthetic joint

_____ Diabetes

_____ Pulmonary disease

_____ Drug allergies

_____ Radiation therapy to head/neck

_____ Endocarditis

_____ Renal dialysis with shunts

_____ Heart murmur

_____ Renal disease

_____ Hepatitis

_____ Rheumatic heart disease

_____ HIV

_____ Systemic lupus erythematosus

_____ Hypertension

_____ Systemic-pulmonary artery shunt

_____ Liver disease

_____ Other: _____

Treatment to be performed on this patient includes:

_____ Oral surgical procedures

_____ Local anesthesia obtained with 2% Lidocaine,
1:100,000 epinephrine

_____ Extractions

_____ Local anesthesia epinephrine concentration may
be increased to 1:50,000 for hemostasis,
but will NOT exceed 0.2mg total

_____ Endodontic treatment (root canal)

_____ Deep scaling (with some removal of epithelial tissue)

_____ Dental radiographs (x-rays)

_____ Use of magnetostrictive ultrasonic devices

Most patients experience the following with the above planned procedures:

_____ Minimal bleeding with transient bacteria

_____ Appointment length: _____

_____ Prolonged bleeding

_____ Number and frequency of appointments: _____

_____ Stress and anxiety: _____ Low _____ Moderate _____ High

_____ Other: _____

Dentist's Signature _____

Date _____

Figure 4-17. Page 1 of Medical Consultation Request.



American Dental Association
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Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:
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HEALTH HISTORY FORM

Name: **DOI** **DONNA** **D.** Home Phone: **(828) 555-4211** Business Phone: **(828) 555-8716**
 Address: **1401** **SPRINGFIELD ST.** City: **ARDEN** State: **NC** Zip Code: **28711**
 P.O. BOX or Mailing Address
 Occupation: **HIGH SCHOOL TEACHER** Height: **5'5"** Weight: **127** Date of Birth: **27 YRS** Sex: M ☐ F ☒
 SS#: **III-II-III** Emergency Contact: **DENNIS DORI** Relationship: **HUSBAND** Phone: **(828) 555-2627**

If you are completing this form for another person, what is your relationship to that person?

NAME

RELATIONSHIP

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

	Yes	No	Don't Know	
Do your gums bleed when you brush?	☒	☐	☐	How would you describe your current dental problem? CHECK-UP
Have you ever had orthodontic (braces) treatment?	☒	☐	☐	
Are your teeth sensitive to cold, hot, sweets or pressure?	☐	☒	☐	Date of your last dental exam: 6 MONTHS
Do you have earaches or neck pains?	☐	☒	☐	Date of last dental x-rays: 1 YEAR
Have you had any periodontal (gum) treatments?	☐	☒	☐	What was done at that time? CHECK-UP
Do you wear removable dental appliances?	☐	☒	☐	How do you feel about the appearance of your teeth? OK
Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐	
If yes, explain:				

MEDICAL INFORMATION

	Yes	No	Don't Know	
If you answer yes to any of the 3 items below, please stop and return this form to the receptionist.				
Have you had any of the following diseases or problems?				
Active Tuberculosis	☐	☒	☐	Are you taking or have you recently taken any medicine(s) including non-prescription medicine? ☒ ☐ ☐
Persistent cough greater than a 3 week duration	☐	☒	☐	If yes, what medicine(s) are you taking?
Cough that produces blood	☐	☒	☐	Prescribed: SEE LIST
Are you in good health?	☒	☐	☐	Over the counter:
Has there been any change in your general health within the past year?	☐	☒	☐	Vitamins, natural or herbal preparations and/or diet supplements:
Are you now under the care of a physician?	☒	☐	☐	Are you taking, or have you taken, any diet drugs such as Pondimin (fenfluramine), Redux (dexphenfluramine) or phen-fen (fenfluramine-phentermine combination)? ☐ ☒ ☐
If yes, what is/are the condition(s) being treated?				Do you drink alcoholic beverages? ☐ ☒ ☐
PREGNANT				If yes, how much alcohol did you drink in the last 24 hours?
Date of last physical examination: LAST WEEK				In the past week?
Physician: DR. M.C. NEWCOMB (828) 555-2147				Are you alcohol and/or drug dependent? ☐ ☒ ☐
NAME: 540 MARKET ST. PHONE: ASHVILLE 28801				If yes, have you received treatment? (circle one) Yes / No
ADDRESS: CITY/STATE: ZIP:				Do you use drugs or other substances for recreational purposes? ☐ ☒ ☐
NAME: PHONE:				If yes, please list:
ADDRESS: CITY/STATE: ZIP:				Frequency of use (daily, weekly, etc.):
Have you had any serious illness, operation, or been hospitalized in the past 5 years? ☒ ☐ ☐				Number of years of recreational drug use:
If yes, what was the illness or problem?				Do you use tobacco (smoking, snuff, chew)? ☐ ☒ ☐
BROKEN LEG - KNEE REPLACEMENT				If yes, how interested are you in stopping? (circle one) Very / Somewhat / Not interested
				Do you wear contact lenses? ☒ ☐ ☐

PLEASE COMPLETE BOTH SIDES

Figure 4-18A. Page I of the health history form for fictitious patient Mrs. Doi.

	Yes	No	Don't Know		Yes	No	Don't Know
--	-----	----	---------------	--	-----	----	---------------

Are you allergic to or have you had a reaction to?

Local anesthetics	☐	☒	☐	Have you had an orthopedic total joint (hip, knee, elbow, finger) replacement?	☒	☐	☐
Aspirin	☒	☐	☐	If yes, when was this operation done? <u>3 YEARS AGO</u>			
Penicillin or other antibiotics	☐	☒	☐	If you answered yes to the above question, have you had any complications or difficulties with your prosthetic joint? <u>NO</u>			
Barbiturates, sedatives, or sleeping pills	☐	☒	☐				
Sulfa drugs	☐	☒	☐				
Codeine or other narcotics	☐	☒	☐				
Latex	☐	☒	☐				
Iodine	☐	☒	☐				
Hay fever/seasonal	☒	☐	☐	Has a physician or previous dentist recommended that you take antibiotics prior to your dental treatment?	☐	☒	☐
Animals	☐	☐	☐	If yes, what antibiotic and dose?			
Food (specify) _____	☐	☒	☐	Name of physician or dentist:			
Other (specify) <u>CATS</u>	☒	☐	☐	Phone:			
Metals (specify) _____	☐	☒	☐				

To yes responses, specify type of reaction.

SNEEZING, WATERY EYES

WOMEN ONLY

Are you or could you be pregnant? <u>5 MONTHS</u>	☒	☐	☐
Nursing?	☐	☒	☐
Taking birth control pills or hormonal replacement?	☐	☒	☐

Please (X) a response to indicate if you have or have not had any of the following diseases or problems.

	Yes	No	Don't Know		Yes	No	Don't Know
--	-----	----	---------------	--	-----	----	---------------

Abnormal bleeding	☐	☒	☐	Hemophilia	☐	☒	☐
AIDS or HIV infection	☐	☒	☐	Hepatitis, jaundice or liver disease	☐	☒	☐
Anemia	☐	☒	☐	Recurrent Infections	☐	☒	☐
Arthritis	☐	☒	☐	If yes, indicate type of infection: _____			
Rheumatoid arthritis	☐	☒	☐	Kidney problems	☐	☒	☐
Asthma	☐	☒	☐	Mental health disorders. If yes, specify: _____			
Blood transfusion. If yes, date: _____	☐	☒	☐	Malnutrition	☐	☒	☐
Cancer/Chemotherapy/Radiation Treatment	☐	☒	☐	Night sweats	☐	☒	☐
Cardiovascular disease. If yes, specify below:	☐	☒	☐	Neurological disorders. If yes, specify: _____			
Angina				Osteoporosis	☐	☒	☐
Arteriosclerosis				Persistent swollen glands in neck			
Artificial heart valves				Respiratory problems. If yes, specify below:	☐	☒	☐
Congenital heart defects				Emphysema			
Congestive heart failure				Bronchitis, etc.			
Coronary artery disease				Severe headaches/migraines	☒	☐	☐
Coronary artery disease				Severe or rapid weight loss	☐	☒	☐
Damaged heart valves				Sexually transmitted disease	☐	☒	☐
Heart attack				Sinus trouble	☒	☐	☐
Chest pain upon exertion	☐	☒	☐	Sleep disorder	☐	☒	☐
Chronic pain	☐	☒	☐	Sores or ulcers in the mouth	☐	☒	☐
Disease, drug, or radiation-induced immunosuppression	☐	☒	☐	Stroke	☐	☒	☐
Diabetes. If yes, specify below:	☐	☒	☐	Systemic lupus erythematosus	☐	☒	☐
Type I (Insulin dependent)				Tuberculosis	☐	☒	☐
Type II				Thyroid problems	☐	☒	☐
Dry Mouth	☐	☒	☐	Ulcers	☐	☒	☐
Eating disorder. If yes, specify: _____	☐	☒	☐	Excessive urination	☐	☒	☐
Epilepsy	☐	☒	☐	Do you have any disease, condition, or problem not listed above that you think I should know about?	☐	☒	☐
Fainting spells or seizures	☐	☒	☐	Please explain:			
Gastrointestinal disease	☐	☒	☐				
G.E. Reflux/persistent heartburn	☒	☐	☐				
Glaucoma	☐	☒	☐				

NOTE: Both Doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

Donna Doi

1/30/XX

SIGNATURE OF PATIENT/LEGAL GUARDIAN

DATE

FOR COMPLETION BY DENTIST

Comments on patient interview concerning health history:

Significant findings from questionnaire or oral interview:

Dental management considerations:

Health History Update: On a regular basis the patient should be questioned about any medical history changes, date and comments notated, along with signature.

Date

Comments

Signature of patient and dentist

Figure 4-18B. Page 2 of the health history form for fictitious patient Mrs. Doi.

Medical History Synopsis: Part 1

Patient DONNA DOI Date 1/30/XX

Student or Clinician _____

PART 1: MEDICAL CONDITIONS, DISEASES, AND SURGERIES

Diseases, Conditions, Surgeries

Concerns for Dental Treatment

[illegible]

PART 2: MEDICATIONS - PRESCRIBED AND OTC

Medications

Concerns for Dental Treatment

[illegible]

Figure 4-20A. Medical History Synopsis Part I.

Medical Consultation Request

To Dr: _____

Date _____

Please complete the form below and return to:

RE: _____

Dr: _____

Date of Birth: _____

Phone: _____

Fax #: _____

Dear Dr: _____

The above named patient has presented with the following medical problem(s): _____

_____ Adrenal insufficiency or steroid therapy

_____ Leukemia

_____ Anemia

_____ Mitral valve prolapse

_____ Anticoagulant therapy

_____ Pacemaker

_____ Bleeding disorder

_____ Prescription diet drugs

_____ Cardiovascular disease

_____ Prosthetic heart valve

_____ Chemotherapy

_____ Prosthetic joint

_____ Diabetes

_____ Pulmonary disease

_____ Drug allergies

_____ Radiation therapy to head/neck

_____ Endocarditis

_____ Renal dialysis with shunts

_____ Heart murmur

_____ Renal disease

_____ Hepatitis

_____ Rheumatic heart disease

_____ HIV

_____ Systemic lupus erythematosus

_____ Hypertension

_____ Systemic-pulmonary artery shunt

_____ Liver disease

_____ Other: _____

Treatment to be performed on this patient includes:

_____ Oral surgical procedures

_____ Local anesthesia obtained with 2% Lidocaine,
1:100,000 epinephrine

_____ Extractions

_____ Local anesthesia epinephrine concentration may
be increased to 1:50,000 for hemostasis,
but will NOT exceed 0.2mg total

_____ Endodontic treatment (root canal)

_____ Deep scaling (with some removal of epithelial tissue)

_____ Dental radiographs (x-rays)

_____ Use of magnetostrictive ultrasonic devices

Most patients experience the following with the above planned procedures:

_____ Minimal bleeding with transient bacteria

_____ Appointment length: _____

_____ Prolonged bleeding

_____ Number and frequency of appointments: _____

_____ Stress and anxiety: _____ Low _____ Moderate _____ High

_____ Other: _____

Dentist's Signature _____

Date _____

Figure 4-21. Page 1 of Medical Consultation Request.

ADA American Dental Association www.ada.org	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Medical Alert:</td> <td style="width: 15%;">Condition:</td> <td style="width: 15%;">Premedication:</td> <td style="width: 15%;">Allergies:</td> <td style="width: 15%;">Anesthesia:</td> <td style="width: 15%;">Date:</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:						
Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:								

HEALTH HISTORY FORM

Name: EADS ESTHER E. Home Phone: (828) 555-7531 Business Phone: ()
LAST FIRST MIDDLE
 Address: 65 HOLLY LANE City: ASHVILLE State: NC Zip Code: 28801
P.O. BOX or Mailing Address
 Occupation: RETIRED SCHOOL TEACHER Height: 5'2" Weight: 120 Date of Birth: 794RS Sex: M ☐ F ☒
 SS#: III-II-III Emergency Contact: ETHAN EADS Relationship: SON Phone: (714) 555-1122

If you are completing this form for another person, what is your relationship to that person? _____

NAME RELATIONSHIP

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

	Yes	No	Don't Know	
Do your gums bleed when you brush?	☐	☒	☐	How would you describe your current dental problem? <u>CHECK-UP</u>
Have you ever had orthodontic (braces) treatment?	☐	☐	☐	
Are your teeth sensitive to cold, hot, sweets or pressure?	☐	☒	☐	Date of your last dental exam: <u>2 YEARS</u>
Do you have earaches or neck pains?	☐	☒	☐	Date of last dental x-rays: <u>2 YEARS</u>
Have you had any periodontal (gum) treatments?	☐	☒	☐	What was done at that time? <u>CHECK-UP</u>
Do you wear removable dental appliances?	☐	☒	☐	How do you feel about the appearance of your teeth? <u>FINE</u>
Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐	
If yes, explain: _____				

MEDICAL INFORMATION

	Yes	No	Don't Know	
If you answer yes to any of the 3 items below, please stop and return this form to the receptionist.				
Have you had any of the following diseases or problems?				
Active Tuberculosis	☐	☒	☐	Are you taking or have you recently taken any medicine(s) including non-prescription medicine? ☒ ☐ ☐
Persistent cough greater than a 3 week duration	☐	☒	☐	If yes, what medicine(s) are you taking? _____
Cough that produces blood	☐	☒	☐	Prescribed: <u>SEE ATTACHED LIST</u>
Are you in good health?	☐	☒	☐	Over the counter: _____
Has there been any change in your general health within the past year?	☐	☒	☐	Vitamins, natural or herbal preparations and/or diet supplements: _____
Are you now under the care of a physician?	☒	☐	☐	Are you taking, or have you taken, any diet drugs such as Pondimin (fenfluramine), Redux (dexphenfluramine) or phen-fen (fenfluramine-phentermine combination)? ☐ ☒ ☐
If yes, what is/are the condition(s) being treated? <u>HEART PROBLEMS</u>				Do you drink alcoholic beverages? ☐ ☒ ☐
Date of last physical examination: <u>6 WEEKS</u>				If yes, how much alcohol did you drink in the last 24 hours? _____
Physician: <u>DR. CLAUDIA SMIDT (828) 555-4666</u>				In the past week? _____
NAME <u>2401 MARKET AVENUE</u> PHONE <u>28801</u>				Are you alcohol and/or drug dependent? ☐ ☒ ☐
ADDRESS CITY/STATE ZIP				If yes, have you received treatment? (circle one) Yes / No
NAME PHONE				Do you use drugs or other substances for recreational purposes? ☐ ☒ ☐
ADDRESS CITY/STATE ZIP				If yes, please list: _____
Have you had any serious illness, operation, or been hospitalized in the past 5 years? ☒ ☐ ☐				Frequency of use (daily, weekly, etc.): _____
If yes, what was the illness or problem? <u>HEART VALVE REPLACED</u>				Number of years of recreational drug use: _____
<u>BYPASS SURGERY</u>				Do you use tobacco (smoking, snuff, chew)? ☐ ☒ ☐
				If yes, how interested are you in stopping? (circle one) Very / Somewhat / Not interested
				Do you wear contact lenses? ☐ ☒ ☐

PLEASE COMPLETE BOTH SIDES

Figure 4-22A. Page I of the health history form for fictitious patient Miss Eads.

Are you allergic to or have you had a reaction to?			Yes No Don't Know			Yes No Don't Know					
Local anesthetics	☐	☒	☐	Have you had an orthopedic total joint (hip, knee, elbow, finger) replacement?	☐	☒	☐				
Aspirin	☒	☐	☐	If yes, when was this operation done?							
Penicillin or other antibiotics	☒	☐	☐	If you answered yes to the above question, have you had any complications or difficulties with your prosthetic joint?							
Barbiturates, sedatives, or sleeping pills	☐	☒	☐								
Sulfa drugs	☐	☒	☐								
Codeine or other narcotics	☐	☒	☐								
Latex	☐	☒	☐								
Iodine	☐	☒	☐								
Hay fever/seasonal	☐	☒	☐	Has a physician or previous dentist recommended that you take antibiotics prior to your dental treatment?	☐	☐	☒				
Animals	☐	☒	☐	If yes, what antibiotic and dose?							
Food (specify) _____	☐	☒	☐	Name of physician or dentist*: _____							
Other (specify) _____	☐	☒	☐	Phone: _____							
Metals (specify) _____	☐	☒	☐								
To yes responses, specify type of reaction.											

WOMEN ONLY											
Are you or could you be pregnant?				☐	☒	☐					
Nursing?				☐	☒	☐					
Taking birth control pills or hormonal replacement?				☐	☒	☐					
Please (X) a response to indicate if you have or have not had any of the following diseases or problems.											
Abnormal bleeding			☐	☒	☐	Hemophilia			☐	☒	☐
AIDS or HIV infection			☐	☒	☐	Hepatitis, jaundice or liver disease			☐	☒	☐
Anemia			☐	☐	☒	Recurrent Infections <u>LEG</u>			☒	☐	☐
Arthritis			☐	☒	☐	If yes, indicate type of infection: <u>LEG</u>			☐	☒	☐
Rheumatoid arthritis			☐	☒	☐	Kidney problems			☐	☒	☐
Asthma			☐	☒	☐	Mental health disorders. If yes, specify: _____			☐	☒	☐
Blood transfusion. If yes, date: _____			☐	☒	☐	Malnutrition			☐	☒	☐
Cancer/Chemotherapy/Radiation Treatment			☐	☒	☐	Night sweats			☐	☒	☐
Cardiovascular disease. If yes, specify below:			☒	☐	☐	Neurological disorders. If yes, specify: _____			☒	☐	☐
___ Angina	___ Heart murmur					Osteoporosis			☒	☐	☐
___ Arteriosclerosis	___ High blood pressure					Persistent swollen glands in neck			☐	☒	☐
___ Artificial heart valves	___ Low blood pressure					Respiratory problems. If yes, specify below:			☐	☒	☐
___ Congenital heart defects	___ Mitral valve prolapse					___ Emphysema					
___ Congestive heart failure	___ Pacemaker					___ Bronchitis, etc.					
___ Coronary artery disease	___ Rheumatic heart					Severe headaches/migraines			☐	☒	☐
___ Damaged heart valves	___ disease/Rheumatic fever					Severe or rapid weight loss			☐	☒	☐
___ Heart attack <u>6 MONTHS AGO</u>						Sexually transmitted disease			☐	☒	☐
Chest pain upon exertion	☒	☐	☐			Sinus trouble			☐	☒	☐
Chronic pain	☐	☒	☐			Sleep disorder			☐	☒	☐
Disease, drug, or radiation-induced immunosuppression	☐	☒	☐			Sores or ulcers in the mouth			☐	☒	☐
Diabetes. If yes, specify below:	☐	☒	☐			Stroke			☐	☒	☐
___ Type I (Insulin dependent)	___ Type II					Systemic lupus erythematosus			☐	☒	☐
Dry Mouth	☐	☒	☐			Tuberculosis			☐	☒	☐
Eating disorder. If yes, specify: _____	☐	☒	☐			Thyroid problems			☐	☒	☐
Epilepsy	☐	☒	☐			Ulcers			☐	☒	☐
Fainting spells or seizures	☐	☒	☐			Excessive urination			☐	☒	☐
Gastrointestinal disease	☐	☒	☐			Do you have any disease, condition, or problem not listed above that you think I should know about?			☐	☒	☐
G.E. Reflux/persistent heartburn	☐	☒	☐			Please explain: _____					
Glaucoma	☐	☒	☐								

NOTE: Both Doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

Esther Eads
SIGNATURE OF PATIENT/LEGAL GUARDIAN

1/24/XX
DATE

FOR COMPLETION BY DENTIST

Comments on patient interview concerning health history:

Significant findings from questionnaire or oral interview:

Dental management considerations:

Health History Update: On a regular basis the patient should be questioned about any medical history changes, date and comments notated, along with signature.

Date

Comments

Signature of patient and dentist

Figure 4-22B. Page 2 of the health history form for fictitious patient Miss Eads.

Medication List

Patient ESTHER EADS Date 1/24/XX

PRESCRIBED

WARFARIN 5MG ONCE A DAY

CALAN SR (VERAPAMIL) 240MG EACH MORNING

ENALAPRIL 5MG TWICE A DAY

SIMVASTATIN 5MG ONCE A DAY IN PM

OVER-THE-COUNTER

VITAMINS, HERBS, DIET SUPPLEMENTS

MELATONIN ONE TABLET EACH EVENING

Figure 4-23. Medication list for fictitious patient Miss Eads.

Medical History Synopsis: Part 1

Patient ESTHER EADS Date 1/24/XX

Student or Clinician _____

PART 1: MEDICAL CONDITIONS, DISEASES, AND SURGERIES

Diseases, Conditions, Surgeries

Concerns for Dental Treatment

PART 2: MEDICATIONS - PRESCRIBED AND OTC

Medications

Concerns for Dental Treatment

Figure 4-24A. Medical History Synopsis Part 1.

Medical Consultation Request

To Dr: _____

Date _____

Please complete the form below and return to:

RE: _____

Dr: _____

Date of Birth: _____

Phone: _____

Fax #: _____

Dear Dr: _____

The above named patient has presented with the following medical problem(s): _____

_____ Adrenal insufficiency or steroid therapy

_____ Leukemia

_____ Anemia

_____ Mitral valve prolapse

_____ Anticoagulant therapy

_____ Pacemaker

_____ Bleeding disorder

_____ Prescription diet drugs

_____ Cardiovascular disease

_____ Prosthetic heart valve

_____ Chemotherapy

_____ Prosthetic joint

_____ Diabetes

_____ Pulmonary disease

_____ Drug allergies

_____ Radiation therapy to head/neck

_____ Endocarditis

_____ Renal dialysis with shunts

_____ Heart murmur

_____ Renal disease

_____ Hepatitis

_____ Rheumatic heart disease

_____ HIV

_____ Systemic lupus erythematosus

_____ Hypertension

_____ Systemic-pulmonary artery shunt

_____ Liver disease

_____ Other: _____

Treatment to be performed on this patient includes:

_____ Oral surgical procedures

_____ Local anesthesia obtained with 2% Lidocaine,
1:100,000 epinephrine

_____ Extractions

_____ Endodontic treatment (root canal)

_____ Local anesthesia epinephrine concentration may
be increased to 1:50,000 for hemostasis,
but will NOT exceed 0.2mg total

_____ Deep scaling (with some removal of epithelial tissue)

_____ Dental radiographs (x-rays)

_____ Use of magnetostrictive ultrasonic devices

Most patients experience the following with the above planned procedures:

_____ Minimal bleeding with transient bacteria

_____ Appointment length: _____

_____ Prolonged bleeding

_____ Number and frequency of appointments: _____

_____ Stress and anxiety: _____ Low _____ Moderate _____ High

_____ Other: _____

Dentist's Signature _____

Date _____

Figure 4-25. Page I of Medical Consultation Request.

SECTION 6 QUICK QUESTIONS

1. The most important reason for conducting a thorough medical history assessment is to:
 - A. Prevent lawsuits
 - B. Protect the health of the patient
 - C. Identify possible oral manifestations
 - D. Get to know the patient
2. The medical history is designed to gather information about:
 - A. Current health problems
 - B. Past health problems
 - C. Hospitalizations and surgeries
 - D. All of the above
3. Assessing a patient's medical history may involve finding a way to communicate with patients who speak a different language from that of the health care provider.
 - A. True
 - B. False
4. When consulting with a physician, it is important to remember that a physician:
 - A. Is too busy to spend much time answering your questions
 - B. Is very knowledgeable about how dental procedures can impact a patient's health
 - C. Is a medical expert who has extensive knowledge of dental procedures
 - D. Is a medical expert who may have little knowledge of dental procedures
5. When outlining planned treatment to a physician, it is important to include all of the following, EXCEPT:
 - A. A cost estimate for the treatment
 - B. Surgical procedures to be done
 - C. Medications and anesthetics that will be used
 - D. Possible complications of treatment
6. Before contacting a physician, the patient must grant written permission for the physician to release information to the dental health care provider. The consultation with a patient's physician may be conducted over the telephone.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
7. Which ASA classification indicates a healthy patient who is anxious or fearful of dental treatment?
 - A. ASA 1
 - B. ASA 2
 - C. ASA 3
 - D. ASA 4

- 8.** Which ASA classification indicates a patient with severe systemic disease that limits its activity, such as a history of heart attack?
- A.** ASA 1
 - B.** ASA 2
 - C.** ASA 3
 - D.** ASA 4
- 9.** Which ASA classification indicates a patient with mild systemic disease, such as well-controlled epilepsy?
- A.** ASA 1
 - B.** ASA 2
 - C.** ASA 3
 - D.** ASA 4
- 10.** Elective dental care should be postponed for a patient with which of the following conditions?
- A.** History of angina
 - B.** Uncontrolled diabetes
 - C.** High blood pressure that is well controlled by medication
 - D.** Osteoporosis

SECTION 7 SKILL CHECK

TECHNIQUE SKILL CHECKLIST

MEDICAL HISTORY QUESTIONNAIRE

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**. Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Reads through every line and check box on the completed health history form. Identifies any unanswered questions on the health history form and follows up to obtain complete information.		
Makes notes about any information that is not clear or difficult to read. Confirms that the patient has signed and dated the form.		
Circles YES responses in red. Reads through all handwritten responses and circles concerns in red.		
Researches medical conditions and diseases including: definition, symptoms and manifestations. Lists potential impact on oral health and any treatment concerns or needed modifications for dental treatment.		
Researches all prescription and over-the-counter medications. Lists potential impact on oral health and any concerns or needed modifications for dental treatment		
Formulates a list of follow-up questions for the patient interview.		
Formulates a preliminary opinion of the medical risk to the patient of dental treatment and whether a medical consult will be needed. (After completing the patient interview, discusses medical risk and need for medical consultation with a clinical instructor.)		
OPTIONAL GRADE PERCENTAGE CALCULATION Total " S "s in each I column.		
Sum of " S "s _____ divided by Total Points Possible (7) equals the Percentage Grade _____		

(Note Skill Checklist continues on the next page)

COMMUNICATION SKILL CHECKLIST**ROLE-PLAY FOR MEDICAL HISTORY**

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of a fictitious patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play. Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains the purpose of the medical history assessment to the patient.		
After researching medical conditions and medications, asks appropriate follow-up questions to gain complete information from the patient.		
Encourages patient questions before and during the medical history assessment.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level and avoids dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications of the medical history findings for dental treatment. Uses correct medical and dental terminology.		
Optional Grade Percentage Calculation Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (6) equals the Percentage Grade _____		

MODULE 5

Ready References: Medical History

MODULE OVERVIEW

This module contains three ready references designed to provide fast access to commonly encountered medical conditions and prescription medications.

- Ready Reference 5-1: Common Conditions of Concern in Dentistry
- Ready Reference 5-2: Commonly Prescribed Drugs
- Ready Reference 5-3: Generic–Brand Name Cross Reference

MODULE OUTLINE

SECTION 1	Medical Conditions and Diseases	129
SECTION 2	Common Prescription Medications	140
SECTION 3	Brand Names for Generic Drugs	164
SECTION 4	Module Resources	173

Internet Resource: Patient Informational Sheet on Antibiotic Premedication
Module Reference

SKILL GOALS

- Demonstrate skills in using the “Ready References” in this module to research patient medical conditions/diseases and prescription medications.
- Describe contraindications and complications for dental care presented by various medical conditions/diseases and prescription medications.

INTRODUCTION TO READY REFERENCES

In a dental office or clinic, using the Internet or reference books to research medical conditions and medications may not be practical within minutes of seeing a newly appointed patient. This module contains three Ready References designed to provide fast access to dentally relevant information on medical conditions/diseases and prescription medications commonly encountered in dental offices and clinics.

- These Ready References may be removed from the book by tearing along the perforated lines on each page.
- Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

SECTION 1 MEDICAL CONDITIONS AND DISEASES

Ready Reference 5-1. Common Conditions of Concern in Dentistry

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Addison's Disease (Adrenal Insufficiency) —endocrine or hormonal disorder characterized by weight loss, muscle weakness, fatigue, low blood pressure, and sometimes darkening of the skin; Addison's disease occurs when the adrenal glands do not produce enough of the hormone cortisol and, in some cases, the hormone aldosterone	Body less able to respond to stress Increased susceptibility to infection Acute adrenal insufficiency
AIDS: See HIV	
Alcoholism —addiction to alcohol	Avoid mouthwashes or other products containing alcohol Bleeding tendency Caution when using conscious sedation or CNS depressant drugs Patient may lack interest in dental health
Allergy —a sensitivity to a normally harmless substance that provokes a strong reaction from the person's body	Possible allergy to latex, other products or materials used in dentistry Possible xerostomia due to medications Anaphylaxis
Amyotrophic lateral sclerosis (ALS): See Lou Gehrig's Disease	
Alzheimer's —progressive deterioration of intellectual functions such as memory	Communication and patient management
Anemia —a blood condition in which there are too few red blood cells or the red blood cells are deficient in hemoglobin	Gingival inflammation Bleeding tendency
Angina —a medical condition in which lack of blood to the heart causes severe chest pains	If taking aspirin therapy, bleeding time is increased and other pain relievers such as ibuprofen may be contraindicated. Reduce stress by scheduling shorter, early morning appointments, minimize stress Anginal attack
Anticoagulant therapy —used to prevent blood clots from forming in the deep veins of the body for prevention of stroke and heart attack	Anticoagulants work by increasing the time it takes the blood to clot; increased bleeding from invasive dental treatment, including periodontal debridement (scaling and root planing)

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Arthritis —inflammation of the joints causing pain, swelling, enlargement, and redness; also see Rheumatoid arthritis	Daily plaque control may be difficult, suggest alternatives to hand brushing and flossing If taking prednisone or other corticosteroid, increased susceptibility to infection (see Corticosteroid therapy) If taking aspirin, bleeding (see Aspirin)
Aspirin/antiplatelet therapy —used to prevent platelet clumping and formation of blood clots	Control of bleeding after periodontal debridement (scaling) or surgical procedures
Acromegaly —abnormal production of growth hormone from pituitary gland causes enlarged hands and feet, enlarged lips and tongue, protruding jaw and widely spaced teeth.	Fatigue and muscle weakness caused by this condition are indications for shorter dental appointments.
Asthma —a respiratory disease that causes blockage and narrowing of the airways, making it difficult to breathe	If taking prednisone: increased risk for infection, poor wound healing, adrenal insufficiency Asthma attack
Attention-deficit/hyperactivity disorder (ADHD) —a chronic disorder that causes inattention, hyperactivity, impulsivity, fidgeting, talking excessively.	If taking psychostimulants such as Ritalin, Adderall, or dextroamphetamine, vasoconstrictors in local anesthesia may be contraindicated. Shorter appointments are necessary.
Bell's palsy —a paralysis or weakness of the muscles on one side of the face; it causes one side of the face to droop and affects taste sensation and tear and saliva production	Protect the eye on the affected side due to the absence of blinking
Bipolar affective disorder —a condition that causes extreme shifts in mood, energy, and functioning	If taking lithium, this drug can interact with non-steroidal anti-inflammatory agents used for pain control
Cerebral palsy —a group of motor problems and physical disorders that result from a brain injury or abnormal brain development; results in uncontrolled reflex movements and muscle tightness (spasticity)	Patient management Dental problems
Cerebrovascular accident (stroke) —a sudden blockage or rupture of a blood vessel in the brain resulting in loss of speech, movement, or sensation for a period of 24 hours or longer	Patient positioning during treatment If taking anticoagulants, bleeding tendency If taking corticosteroids, increased susceptibility to infection and less able to withstand stress
Chemotherapy —the use of chemical agents to treat diseases, infections, or other disorders, especially cancer	Immune suppression results in increased risk of infection and poor wound healing

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Chronic bronchitis —a long-term inflammation and irritation of the airways of the lungs; symptoms include a cough that produces too much sputum, mild wheezing, and chest pain; common in smokers	Patient positioning Respiratory difficulty
Congenital heart defects —structural heart problems or abnormalities that have been present since birth	Consult physician to determine need for antibiotic premedication Susceptibility to bacterial endocarditis
Congestive heart failure (CHF) —a condition in which the heart pumps ineffectively, leading to a buildup of fluid in the lungs, legs, and elsewhere; people with congestive heart failure often experience shortness of breath and/or ankle or leg swelling related to this excess fluid	May have breathing problems, may prefer semi-upright position in dental chair Minimize stress If taking diuretic, possible xerostomia, orthostatic hypotension Respiratory difficulty
Corticosteroid therapy —corticosteroids are anti-inflammatory drugs widely used for treating a variety of conditions in which tissues become inflamed; an example is prednisone	Immune suppression with increased risk of infection and poor wound healing; lowered tolerance for stress, hypertension.
Crohn's disease —an inflammatory bowel disease (IBD) thought to be an autoimmune response to bacterial flora in intestines	Immune suppression with increased risk of infection and poor wound healing. May require prophylactic antibiotic for periodontal debridement.
Cystic fibrosis (CF) —a genetically inherited disease; in the lungs, CF causes thicker-than-normal mucus to form in the airways and lungs, leading to respiratory problems and infections	Increased susceptibility to infection Patient positioning. Disease is controlled by numerous anti-infective drugs.
Diabetes (Type I) —a lifelong disease that develops when the pancreas stops producing insulin; insulin injections must be taken daily	Increased susceptibility to infection and poor wound healing Appropriate appointment time in regard to insulin therapy and meals Frequent maintenance appointments Insulin reaction if using insulin
Diabetes (Non-insulin dependent) —a chronic disease that develops when the pancreas cannot produce enough insulin, or the body cannot use it properly; it can often be treated without insulin injections	Increased risk of infection Poor wound healing Frequent maintenance appointments Insulin reaction if taking oral hypoglycemic drugs or using insulin

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Down syndrome —people with Down syndrome have an extra or irregular chromosome in some or all of their body's cells; the chromosomal abnormalities impair physical and mental development with mild to moderate below-normal intelligence	Increased risk of infection, leukemia, and hypothyroidism May need caregiver's assistance with daily plaque control self-care
Emphysema —a chronic lung disease in which the alveoli of the lungs are damaged; air is trapped in the lungs leading to shortness of breath	Breathing problems, may prefer semi-upright position in dental chair If emergency situation, no high concentrations of supplemental oxygen
Endocarditis —an infection of the endocardium (inner lining of the heart)	History of endocarditis indicates high risk for recurrence from dental procedures
Epilepsy —a brain disorder involving recurrent seizures; a seizure can be a sudden, violent, uncontrollable contraction of a group of muscles or consist of only a brief "loss of contact" or what appears to be daydreaming	Dilantin: gingival hyperplasia Minimize stress Document type, frequency, and precipitating factors Seizures
Fibromyalgia —a syndrome distinguished by widespread chronic pain and stiffness in the muscles, ligaments, tendons, or bursae around joints	One third of fibromyalgia patients have TMJ disorders May appreciate shorter appointments
Gastroesophageal reflux disease (GERD) —the abnormal backflow of stomach acid and juices into the esophagus, the tube that leads from the throat to the stomach; results in heartburn and damage to the esophagus	Erosion of teeth Drugs for GERD may interact with antibiotics, analgesics
Glaucoma —damage to the optic nerve, accompanied by an abnormally high pressure inside the eyeball that can lead to blindness if untreated	Avoid drugs that increase ocular pressure. (i.e., atropine)
Glomerulonephritis —a kidney disease caused by inflammation or scarring of the small blood vessels (glomeruli); if chronic leads to kidney failure; also see Kidney disease	Medical consultation Toxic accumulation of drugs, including local anesthesia due to poor drug elimination Increased susceptibility to infection Less able to withstand stress
Graves' disease —the most common cause of hyperthyroidism in which the thyroid gland produces too much thyroid hormone	Epinephrine given to hyperthyroid patient could cause a medical emergency Thyroid storm

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Hashimoto's disease —the most common cause of hypothyroidism in which the thyroid gland produces too little thyroid hormone	CNS depressants given to hypothyroid patient could cause the medical emergency Myxedema coma (low level of thyroid hormone)
Heart attack —see Myocardial infarction.	
Hemophilia —a rare genetic bleeding disorder caused by a shortage of certain clotting factors that are needed to help stop bleeding after a cut or injury and to prevent spontaneous bleeding	Hemorrhage from dental procedures, including periodontal debridement (scaling and root planning)
Hepatitis B —a serious liver infection from hepatitis B virus (HBV); infection may become chronic, leading to liver failure, cancer, or cirrhosis	Laboratory clearance (ensure that infection has been successfully treated) Infection, bleeding, delayed wound healing Standard precautions
Hepatitis C —the most serious of all hepatitis viruses; usually leads to liver failure, liver cancer, or cirrhosis.	Laboratory clearance (ensure that infection has been successfully treated) Infection, bleeding, delayed wound healing Standard precautions
High blood pressure —see Hypertension	
HIV/AIDS —HIV (human immunodeficiency virus) is a virus that attacks the immune system, making it difficult for the body to fight off infection and some disease; HIV eventually causes AIDS (acquired immunodeficiency syndrome)	Oral lesions and infections Risk of infection from dental procedures Severe periodontal disease Standard precautions
Huntington's disease —inherited degenerative disease involving the brain and control of movements as well as mental decline, jerky involuntary movements, difficulty swallowing, and a need to move the entire head to shift gaze.	Patient management Dental problems
Hypertension —high blood pressure; a resting blood pressure consistently 140/90 mm Hg or higher	Epinephrine contraindication If taking diuretic, possible xerostomia, orthostatic hypotension If taking calcium blocker, possible gingival enlargement Cerebrovascular accident (stroke) Myocardial infarction (heart attack)

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Hyperthyroidism —an overproduction of thyroid hormone	Epinephrine given to hyperthyroid patient could cause medical emergency, “Thyroid Storm.”
Hypothyroidism —an insufficient production of thyroid hormone	In severe hypothyroidism, CNS depressant drugs can pose a risk for myxedema coma (low level of thyroid hormone)
Implantable cardioverter defibrillator —a device that delivers an electrical shock to prevent potentially dangerous heart rhythm abnormalities	Medical consultation
Kidney disease, chronic —develops when the kidneys permanently lose most of their ability to remove waste and maintain fluid and chemical balances in the body; in chronic kidney disease, the kidneys have not stopped working altogether but are not working as well as they should, dialysis or kidney transplantation is required when kidney function drops to about 15% of normal	Medical consultation Toxic accumulation of drugs, including local anesthesia due to poor elimination Increased susceptibility to infection Less able to withstand stress Salt restriction Bleeding tendency
Kidney dialysis —a mechanical process that performs part of the work that healthy kidneys normally do by removing wastes and extra fluid from the blood	Medical consultation Toxic accumulation of drugs including local anesthesia due to poor drug elimination Increased susceptibility to infection Less able to withstand stress Salt restriction Bleeding tendency
Latex allergy —an unusual sensitivity to latex that varies from a mild allergic reaction to an anaphylactic response	Avoid latex products; in a clinical setting, all clinicians should avoid “snapping” gloves which creates airborne latex particles Anaphylactic response
Leukemia —cancer of the blood cells in which the bone marrow produces abnormal white blood cells that over time crowd out the normal white blood cells, red blood cells, and platelets	Bleeding tendency Periodontal disease; need for excellent self-care Immune compromised Medical consultation recommended
Liver disorder —impaired function of the liver due to cirrhosis, hepatitis, cancer, alcoholism	Infection, bleeding, delayed wound healing
Lou Gehrig’s disease (Amyotrophic lateral sclerosis)—a progressive wasting away of certain nerve cells of the brain and spinal column; walking, speaking, eating, swallowing, breathing, and other basic functions become more difficult as the disease progresses	Swallowing difficulties; physical disabilities make patient positioning a challenge Daily plaque control may be difficult, suggest alternatives to hand brushing and flossing or educate caregiver

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Lupus erythematosus —an autoimmune disease, in which a person's immune system attacks its own tissues as though they were foreign substances; may cause problems with the kidneys, heart, lungs, or blood cells	Increase susceptibility to infection due to compromised immune system. Treatment often includes corticosteroids resulting in increased risk for infection and adrenal crisis
Meniere's disease —a problem in the inner ear that affects hearing and balance: characterized by repeated attacks of dizziness that occur suddenly and without warning; the vertigo experienced during an attack can be intense, leading to nausea and vomiting, and can last anywhere from several minutes to many hours	Medications may cause xerostomia Hearing loss in affected ear Dizziness; raise chair slowly from supine position Might need assistance in walking due to dizziness
Mental disorder —any disease or condition affecting the brain that influences the way a person thinks, feels, behaves, and/or relates to others and to his or her surroundings	Reduced stress tolerance Xerostomia Avoid mouth rinse containing alcohol
Metabolic syndrome —a group of abnormal findings related to the body's metabolism including excess body fat, high triglycerides and blood pressure, and high cholesterol; causes increased risk of diabetes, heart disease, or stroke	Monitor blood pressure at every appointment
Mitral valve prolapse —an improper closing of the leaflets of the mitral valve; may cause back flow of blood into the left atrium	No longer requires preoperation antibiotic premedication, refer to American Heart Association 2007 [1]
Mitral valve stenosis —a heart condition in which the mitral valve fails to open as wide as it should; can cause irregular heartbeats and possibly heart failure or other complications, including stroke, heart infection, pulmonary edema, and blood clots	No longer requires preoperation antibiotic premedication (American Heart Association 2007) [1]
Mononucleosis —a viral illness usually caused by the Epstein-Barr virus (EBV); most common symptoms of mono include high fever, severe sore throat, swollen glands (especially the tonsils), and fatigue; once infected with EBV, the body may periodically shed (or give off) the virus throughout a person's lifetime, possibly spreading the virus	Standard precautions, as the usual route of transmission is through saliva
Multiple myeloma —a rare form of cancer characterized by excessive production and improper function of the plasma cells found in the bone marrow; symptoms may include bone pain, anemia, weakness, fatigue, and lack of color, and kidney abnormalities; affected individuals are more susceptible to bacterial infections such as pneumonia	Antibiotics may be indicated to control or reduce the incidence of infection

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Multiple sclerosis (MS) —a chronic neurologic disease involving the brain, spinal cord, and optic nerves; causes problems with muscle control and strength, vision, balance, sensation, and mental functions	Adverse reactions to drugs may include risks for infection, difficulties keeping mouth open during long appointments Daily plaque control may be difficult, suggest alternatives to hand brushing and flossing or educate caregiver
Muscular dystrophy (MD) —a group of inherited diseases in which the muscles that control movement progressively weaken	Daily plaque control may be difficult, suggest alternatives to hand brushing and flossing or educate caregiver Muscle weakness and range of motion decrease; as the disease progresses will eventually require oral hygiene assistance for patient
Myasthenia gravis —a neuromuscular disorder primarily characterized by muscle weakness and muscle fatigue; most individuals develop weakness and drooping of the eyelids, double vision, and excessive muscle fatigue; additional features commonly include weakness of facial muscles, impaired articulation of speech, difficulties chewing and swallowing, and weakness of the arms/legs.	Patients may have difficulty in chewing, swallowing, and talking Daily plaque control may be difficult, suggest alternatives to hand brushing and flossing or educate caregiver
Myocardial infarction (MI) —a heart attack; caused by a lack of blood supply to the heart for an extended time period; results in permanent damage to the heart muscle	No elective dental treatment for 6 months Bleeding tendency if taking anticoagulant or aspirin Monitor vital signs Minimize stress with shorter appointments, early morning appointments
Narcolepsy —a chronic sleep disorder mainly characterized by an excessive daytime drowsiness with episodes of suddenly falling asleep	Be alert for sudden episodes of sleeping Stress may cause cataplexy resulting in slurred speech or total physical collapse. If treatment includes psychostimulants, vasoconstrictors are contraindicated.
Non-Hodgkin's lymphoma —cancer of the lymphatic system resulting in painless, swollen lymph nodes; symptoms include fever, drowsiness, weight loss	Swollen lymph nodes may be only sign of condition in early phase
Oral/head and neck cancer —cancerous lesions of the oral cavity and/or head and neck region.	Radiation therapy Medical consultation recommended; may need antibiotic premedication Xerostomia may be present Increased susceptibility to infection Risk of dental caries due to radiation Prevention: early detection of lesions

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Organ transplant —a surgical procedure to remove a damaged or diseased organ and replace it with a healthy donor organ; heart, intestine, kidney, liver, lung, pancreas replacement	Extra precautions to avoid infections Antirejection drugs cause gingival hyperplasia Adrenal insufficiency
Pacemaker —a small device that sends electrical impulses to the heart muscle to maintain a suitable heart rate and rhythm; it is implanted just under the skin of the chest during a minor surgical procedure	Consult with physician on use of ultrasonic devices
Parkinson's disease —a chronic, progressive motor system disorder; the four primary symptoms are tremor or trembling in hands, arms, legs, jaw, and face, rigidity or stiffness of the limbs and trunk, slowness of movement, impaired balance and coordination; patients may have difficulty walking, talking, or completing other simple tasks	Assist patient with positioning in dental chair and when walking to and from treatment area Swallowing difficulties Poor motor control; daily plaque control may be difficult, suggest alternatives to hand brushing and flossing or educate caregiver
Panic disorder —consists of several, unexpected panic attacks, which usually begin with a sudden feeling of extreme anxiety; an attack can be triggered by a stressful event or occur for no apparent reason and can last several minutes; symptoms may include a feeling of intense fear or terror, difficulty breathing, chest pain or tightness, heartbeat changes, dizziness, sweating, and shaking; patients can mistake a panic attack for a heart attack	Provide a stress reduction protocol, if the patient is apprehensive about dental treatment
Peripheral arterial disease (PAD) —poor circulation to limbs, especially the legs; occurs when arteries supplying blood to limbs become clogged or partially blocked	Patient may not be able to tolerate long appointments without frequent walking breaks
Polymyalgia rheumatica —an inflammatory disorder that causes widespread muscle aching and stiffness, especially in the neck, shoulders, thighs and hips	If on long-term corticosteroid therapy, increased susceptibility to infection
Rheumatic heart disease —a condition that can result from rheumatic fever; usually a thickening and constriction of one or more of the heart valves that often requires surgery to repair or replace the involved valve(s)	Medical consultation Antibiotic premedication Minimize stress Monitor vital signs
Rheumatic fever —a rare but potentially life-threatening disease, rheumatic fever is a complication of untreated strep throat	If patient is taking prednisone or another corticosteroid, increased susceptibility to infection Adrenal crisis

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Rheumatoid arthritis —a relatively common disease of the joints; the tissues lining the joints become inflamed; over time, the inflammation may destroy the joint tissues, leading to disability. Rheumatoid arthritis affects women twice as often as men, and frequently begins between the ages of 40 and 60	If patient taking corticosteroids, susceptibility to infection Adrenal crisis
Schizophrenia —a severe brain disease that interferes with normal brain and mental function—it can trigger hallucinations, delusions, paranoia, and significant lack of motivation; without treatment, schizophrenia affects the ability to think clearly, manage emotions, and interact appropriately with other people	Personality problems; may be paranoid, feel threatened, apprehensive If taking medications faithfully most problems will be well controlled; may be drowsy or react slowly to requests or questions
Scleroderma —a connective tissue disorder characterized by abnormal thickening of the skin; some types affect specific parts of the body, while other types can affect the whole body and internal organs	Cardiac, circulatory, pulmonary, and kidney complications
Sexually transmitted diseases (STD) —those diseases that are spread by sexual contact; STDs can also be spread from a pregnant woman to her fetus before or during delivery	Refer to physician and postpone treatment when oral lesions or other signs suggest infection
Sickle cell anemia —an inherited disease in which the red blood cells, normally disc-shaped, become crescent shaped; these cells function abnormally and cause small blood clots; these clots give rise to recurrent painful episodes called “sickle cell pain crises”	Patients have episodes of pain in the chest abdomen and joints At greater risk for infection due to sickle cell damage to the spleen
Sjögren’s syndrome (pronounced “showgrins”)—is a disorder in which the immune system attacks the body’s moisture-producing glands, such as the tear and salivary glands; these glands may become scarred and damaged, and exceptional dryness in the eyes and mouth may develop	Xerostomia predisposes patients to dental caries If major organs are involved there is greater risk for infection
Splenectomy —the removal of a spleen that is enlarged or injured; patients without a spleen are termed asplenic	Increased susceptibility to infection

(continued)

Ready Reference 5-1. Common Conditions of Concern in Dentistry (continued)

MEDICAL CONDITION OR DISEASE	TREATMENT CONSIDERATIONS POTENTIAL MEDICAL EMERGENCY ALERT
Stroke —see Cerebrovascular accident	
Thrombophlebitis —a blood clot and inflammation in one or more veins, typically in the legs; cause is inactivity due to travel or convalescence	Consult with physician regarding anticoagulant therapy and risks for hemorrhage
Tourette's syndrome —a condition that causes patients to exhibit uncontrolled behaviors known as tics; tics range from bouts of lip smacking, blinking, shrugging, repetitive phrases, or shouting obscenities	Patient management if tics are not controlled
Tuberculosis (TB) —a bacterial infection that usually affects the lungs, but can affect other parts of the body; is classified as latent or active; active TB can be spread to others	Active TB may spread through aerosols in clinic (patient should not receive elective dental care) Consult with physician if patient presents with history of TB

*Ready Reference 5-1. Adapted with permission from Cynthia Biron Leisica, DH, Meth-Ed, Inc.

SECTION 2 COMMON PRESCRIPTION MEDICATIONS

Ready Reference 5-2. Commonly Prescribed Drugs

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Abilify	Antipsychotic drug used to treat various psychoses (such as hallucinations, delusional beliefs, disorganized thinking)	Involuntary muscle contractions and tremor that can present problems with patient management during the appointment
Accupril	Angiotensin-converting enzyme (ACE) inhibitor used to treat high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, persistent cough, dizziness, loss of taste, nausea, vomiting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis, angioedema Orthostatic hypotension
Acetaminophen	Acetaminophen is used for the relief of pain and fever	Frequent use of acetaminophen can cause liver toxicity
Aciphex	Acid blocker for treatment of heartburn	Xerostomia, altered taste, nausea, dizziness, nervousness
Actonel	Used for the treatment of Paget's disease (a disease in which the formation of bone is abnormal) and in persons with osteoporosis	Nausea
Actos	Used to treat type II diabetes	Respiratory tract infection, headache, sinusitis, low blood sugar, sore throat; if diabetes is poorly controlled, increased risk of periodontitis
Adderall XR	Used to treat attention-deficit hyperactivity disorder (ADHD) and narcolepsy (central nervous system disease causing excessive daytime sleepiness)	Xerostomia, nervousness, anxiety, restlessness, excitability, dizziness, tremor; blood pressure and heart rate may increase
Advair Discus Inhaler	Inhaled drug that is used to treat asthma and chronic bronchitis	Upper respiratory tract infections
Advil	Nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain	Xerostomia, ulcerations, lichen planus on buccal mucosa/lateral border of tongue, dizziness, drowsiness, nausea, heartburn, increased bleeding tendency
Aggrenox	A medication that reduces the clumping of platelets in the blood; used to prevent blood clots and stroke	Hemorrhage, headaches in 38%

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Aleve	NSAID for relief of mild to moderate pain	Xerostomia, dizziness, drowsiness, nausea, heartburn, increased bleeding tendency
Allegra	An antihistamine used to treat the signs and symptoms of allergy	Xerostomia, nausea
Allegra-D	A combination of an antihistamine and a decongestant used to treat the signs and symptoms of allergy	Xerostomia, dizziness, headache, anxiety, tremor
Alphagan	Used for the treatment of glaucoma	None
Alprazolam	Benzodiazepine used to treat anxiety associated with situations such as dental appointments, or in general anxiety disorders.	Xerostomia, lightheadedness
Altace	Angiotensin-converting enzyme (ACE) inhibitor used to treat high blood pressure, heart failure, and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, dizziness, loss of taste, nausea, fainting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis
Alupent Inhaler	Inhaled bronchodilator	Xerostomia
Amaryl	Oral drug for the control of diabetes	Hypoglycemia, dizziness, nausea; if diabetes is poorly controlled, increased risk of periodontitis
Ambien	Insomnia treatment (sleep aid)	Xerostomia, dizziness
Amitriptyline	Tricyclic antidepressant with pain-relieving effects. Used to treat TMD pain.	Xerostomia, orthostatic hypotension, altered taste
Amlodipine	Calcium channel blocker used to treat angina	Gingival hyperplasia; involuntary muscle contractions, tremors, changes in breathing and heart rate
Amoxicillin	Antibiotic used to treat infections and for the prevention of bacterial endocarditis	Oral candidiasis, black hairy tongue, dizziness, nausea
Amoxil	Antibiotic used to treat infections and for the prevention of bacterial endocarditis	Oral candidiasis, black hairy tongue, dizziness, nausea
Amphetamine	Stimulant for obesity, depression	Xerostomia, taste perversion

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Androgel	Testosterone	None
Apri	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Aricept	Oral medication used to treat Alzheimer's disease	Xerostomia, dizziness, nausea
Aspirin	Nonsteroidal anti-inflammatory drug (NSAID) effective in treating fever, pain, and inflammation	Bleeding
Astelin	Nasal spray for rhinitis	Xerostomia, aphthous ulcers, altered taste
Atacand	Angiotensin II antagonist for high blood pressure	None
Atenolol	Beta blocker used to treat angina and high blood pressure	None
Ativan	Antianxiety medication for depression; also a sleep aid	Dizziness; xerostomia
Atrovent Inhaler	Inhaled bronchodilator used for chronic bronchitis and emphysema	Xerostomia, tremor, nervousness
Augmentin	Antibiotic used to treat bacterial infections	Black hairy tongue, coated tongue, oral candidiasis, nausea, and vomiting
Avalide	Used to treat high blood pressure, diuretic	Dizziness, nausea
Avandia	Oral antibiotic agent used to treat Type II diabetes	If patient is experiencing increased stress there is a risk of hypoglycemia
Avapro	Used to treat high blood pressure, congestive heart failure	Dizziness; use of epinephrine or levonordefrin in local anesthetic should be minimized
Avelox	A quinolone-type antibiotic used to treat pneumonia and eye and skin infections	None
Aviane	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Azathioprine	Immunosuppressant for lichen planus, erythema multiforma, pemphigus	Fever, malaise, rash, GI effects

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Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Azithromycin	Antibiotic, alternative for prevention of endocarditis	Caution in liver disorders
Bactroban	Topical antibiotic used for the treatment of impetigo, infected eczema, also used as a nasal ointment	None
Benazepril	Angiotensin-converting enzyme (ACE) inhibitor used to treat high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, persistent cough, dizziness, loss of taste, nausea, vomiting; use of epinephrine or levonordefrin in local anesthetic should be minimized if diabetes is poorly controlled, increased risk of periodontitis, angioedema orthostatic hypotension
Benicar	Angiotensin II blocker for high blood pressure	Orthostatic hypotension
Biaxin	Antibiotic used to treat bacterial infections	Oral candidiasis, altered taste, cough, dizziness, nausea
Birth Control Pills	A pill that contains the hormones estrogen and progesterone to prevent pregnancy	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Bisoprolol/HCTZ	A combination containing a beta blocker and a diuretic for treatment of high blood pressure.	Abnormal taste Orthostatic hypotension
Bonine	Used for the treatment of nausea, vomiting, and dizziness	Xerostomia, drowsiness
Boniva	Bisphosphonate derivative used to treat osteoporosis	Although bisphosphonates have been linked to osteonecrosis of the jaw, new research shows that only IV administration increases the risk. This drug is administered by mouth.
Bupropion SR	Antidepressant that elevates dopamine to relieve depression	Increases blood pressure and decreases threshold for seizures
Buspirone	For the management of anxiety	Dizziness, nausea, xerostomia
Byetta	Antidiabetic agent in non-insulin-dependent diabetes	Hypoglycemia, nausea
Caduet	A combination containing an anticholesterol drug with a Calcium channel blocker to treat high blood pressure.	Gingival hyperplasia
Calcitonin	Used to treat osteoporosis	Nausea

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Captopril	Angiotensin-converting enzyme (ACE) inhibitor used to treat high blood pressure, heart failure, and for preventing kidney failure due to high blood pressure and diabetes	Black hairy tongue, xerostomia, altered taste, gingival bleeding, ulcerations, glossitis, stomatitis lichen planus on buccal mucosa/lateral borders of tongue, dizziness, loss of taste, nausea, fainting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis
Carbamazepine	Anticonvulsant, also for trigeminal or glossopharyngeal neuralgia	Xerostomia
Carbidopa/levodopa	Used to treat Parkinson's disease	Orthostatic hypotension, anxiety
Carisoprodol	Muscle relaxant and also for TMJ pain	Orthostatic hypotension
Cartia XT	Calcium channel blocker for prevention of angina	Gingival hyperplasia, dizziness
Casodex	Antineoplastic for prostate cancer	Xerostomia
Catapres	For the treatment of hypertension; also used to manage the symptoms of narcotic withdrawal, nicotine withdrawal	Drowsiness, xerostomia, salivary gland enlargement, dizziness; vasoconstrictors in local anesthetic should be minimized.
Cefuroxime	Antibiotic for treatment of bacterial infection	Oral candidiasis, dizziness
Cefzil	Antibiotic for treatment of bacterial infection	Oral candidiasis, dizziness
Celebrex	Nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain of arthritis	Possible increased risk of heart attack, xerostomia, altered taste, vomiting, aphthous ulcers, stomatitis
Celexa	Antidepressant for treatment of depression, obsessive-compulsive disorders, panic disorders	Xerostomia, altered taste, nausea, oral candidiasis, dizziness
Cipro	Antibiotic for treatment of bacterial infections; also used for periodontitis associated with <i>Actinobacillus actinomycetemcomitans</i>	Oral candidiasis, nausea
Chantix	Nonnicotine medication designed to help smokers quit more easily than without the drug	Bad taste in mouth; suicidal thoughts while using medication; suicidal thoughts following withdrawal from medication; nausea, heartburn, depression, agitation, drowsiness, headache; changes in mood or behavior

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Claritin	Antihistamine used to treat the signs and symptoms of allergy	Xerostomia
Claritin-D	Antihistamine with decongestant used to treat the signs and symptoms of allergy	Xerostomia, tachycardia, palpitations
Clindamycin	Antibiotic for treatment of infections, prevention of bacterial endocarditis	Oral candidiasis, dizziness
Clonazepam	Anticonvulsant, benzodiazepine	Dizziness, orthostatic hypotension
Clonidine	Alpha-adrenergic agonist used to treat high blood pressure and congestive heart failure	Hypotension, dizziness
Clopidogrel	A medication that reduces the clumping of platelets in the blood; reduces risks for heart attack and stroke	Increased bleeding
Clorazepate	Benzodiazepine for general anxiety disorder and partial seizures	Xerostomia, drowsiness, orthostatic hypotension
Clotrimazole	Topical antifungal medication in the form of a lozenge (troche) used to treat candidiasis	None
Colchicine	Treatment for gout	None
Clindamycin	Antibiotic for treatment of infections, prevention of bacterial endocarditis	Oral candidiasis, dizziness
Combivent Inhaler	Inhaled bronchodilator used to treat chronic obstructive pulmonary diseases such as chronic bronchitis and emphysema	Xerostomia, fast heart rate, elevated blood pressure, tremor, nausea, dizziness
Combivir	Antiretroviral agent used in progressive HIV+	None
Concerta	Treatment of attention deficit hyperactivity disorder (ADHD)	Hypertension
Coreg	Used to treat high blood pressure and congestive heart failure	Hypotension, dizziness; use of epinephrine or levonordefrin in local anesthetic should be minimized
Cosopt	Beta blocker used to decrease intraocular pressure	Altered taste

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Cotrim	Antibiotic used for urinary tract infections, respiratory tract infections, middle ear infections	Oral candidiasis, dizziness, nausea
Coumadin	Anticoagulant helpful in preventing blood clot formation in patients with atrial fibrillation and artificial heart valves to reduce the risk of strokes	Ulcerations; increased bleeding tendency, medical consult
Cozaar	Used to treat high blood pressure, congestive heart failure	Xerostomia, dizziness; use of epinephrine or levonordefrin in local anesthetic should be minimized
Crestor	Antilipidemic drug used to lower blood cholesterol levels	None
Cyclobenzaprine	Muscle relaxant, also used for TMJ dysfunction	Dizziness, syncope, edema
Cyclosporine	Immunosuppressant in organ transplant	Gingival hyperplasia, oral lesions
Cymbalta	Selective serotonin reuptake inhibitor and selective norepinephrine reuptake inhibitor used to treat depression	Xerostomia
Darvon	Narcotic for relief of mild to moderate pain	Xerostomia, dizziness, nausea
Deltasone (Prednisone)	An oral corticosteroid used to treat arthritis, colitis, asthma, bronchitis	Oral candidiasis With long-term use: increased susceptibility to infection, adrenal insufficiency
Depakote	Used for the treatment of seizures, bipolar disorder, and prevention of migraines	Dizziness, nausea, tremor, periodontal abscess, taste abnormality
Desoximetasone	Topical corticosteroid for treatment of dermatosis	None
Detrol	Used to treat uncontrollable urination due to what is often referred to as an “overactive” bladder	Xerostomia
Dextro-amphetamine	Stimulant: narcolepsy, attention deficit hyperactivity disorder	None
Diazepam	Benzodiazepine used for treatment of general anxiety disorder	Nausea

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Diclofenac	Nonsteroidal anti-inflammatory drug for treatment of rheumatoid arthritis	None
Didanosine	Antiretroviral agent for treatment of HIV+	Xerostomia
Differin	Topical treatment for acne	None
Diflucan	Antifungal used to treat oral, esophageal, urinary, vaginal infections caused by the fungus <i>Candida</i>	Dizziness, nausea
Digitek	Used to treat heart failure and abnormal heart rhythms	Dizziness, irregular heartbeat
Dilantin	Antiseizure medication (anticonvulsant) used to prevent seizures	Gingival hyperplasia. dizziness
Diovan	Used to treat high blood pressure, congestive heart failure	Dizziness; use of epinephrine or levonordefrin in local anesthetic should be minimized
Ditropan XL	Used for adults with symptoms of overactive bladder	Xerostomia
Doxazosin	Alpha ₁ blocker for the treatment of hypertension and benign prostatic hypertrophy	Xerostomia, orthostatic hypotension
Doxycycline	Tetracycline derivative antibiotic for treatment of numerous infections, including periodontitis	Glossitis, tooth staining, and opportunistic candidiasis
DuoNeb	Bronchodilator for chronic obstructive pulmonary disease (COPD) patients	
Duragesic	Transdermal patch used for patients with severe chronic pain, for example, the pain of cancer	Hypotension
Effexor	Antidepressant used for the treatment of depression, depression with anxiety	Dizziness, xerostomia, oral candidiasis, high blood pressure
Elidel	Used for the treatment of mild to moderate dermatitis	Respiratory tract and viral infections
Elocon	Corticosteroid lotion used for the relief of itching and skin conditions	Increased glucose concentration in blood, adrenal insufficiency

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Enalapril	Angiotensin-converting enzyme (ACE) inhibitor used to treat high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, persistent cough, dizziness, loss of taste, nausea, vomiting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis, angioedema Orthostatic hypotension
Enbrel	Antirheumatic for the treatment of rheumatoid arthritis	Risk of infection
Endocet	Narcotic analgesic used to relieve pain	Nausea, dizziness
Esidrix	Diuretic commonly used to treat high blood pressure	Hypotension
Eskalith (Lithium)	Used most frequently for bipolar affective disorder (manic-depressive illness)	Fine hand tremor, dry mouth, altered taste, salivary gland enlargement
Esomeprazole	Decreases the amount of acid produced in the stomach, treatment of gastroesophageal reflux disease (GERD)	Nausea
Estradiol	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Estrogen	Estrogen replacement used to reduce menopause symptoms	None
Ethinyl estradiol norethindrone	Estrogen/progestin hormone replacement used to reduce menopause symptoms	None
Evoclin	Alternative antibiotic for amoxicillin for infective endocarditis	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Fexofenadine	Antihistamine for allergic rhinitis	Xerostomia
Flecainide	Antiarrhythmic agent	Dizziness
Flexeril	Muscle relaxant: TMJ dysfunction	Xerostomia, black hairy tongue, dizziness, syncope, edema
Flomax	Treatment of men who are having difficulty urinating	Orthostatic hypotension
Flonase	Topical corticosteroid used for the control of the symptoms of allergic rhinitis	Oral candidiasis

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Flovent Inhaler	Inhaled topical corticosteroid used for the control of asthma	Oral candidiasis
Focalin XR	CNS stimulant attention deficit hyperactivity disorder (ADHD)	Xerostomia, headache
Fosamax	Used for the treatment of Paget's disease (a disease in which the formation of bone is abnormal) and in persons with osteoporosis	Nausea, heartburn
Fosinopril	Angiotensin-converting enzyme (ACE) inhibitor used to treat high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, persistent cough, dizziness, loss of taste, nausea, vomiting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis, angioedema Orthostatic hypotension
Furosemide	Diuretic used to treat high blood pressure and congestive heart failure	Orthostatic hypotension
Fuzeon	Antiretroviral agent for the treatment of HIV	Xerostomia, taste abnormality
Glucagon	Oral drug for the control of diabetes	Hypoglycemia, dizziness, nausea; if diabetes is poorly controlled, increased risk of periodontitis
Glucophage	Oral drug for the control of diabetes	Oral candidiasis, altered taste, hypoglycemia, dizziness, nausea; if diabetes is poorly controlled, increased risk of periodontitis
Glucotrol	Oral drug for the control of diabetes	Oral candidiasis, hypoglycemia, dizziness, nausea; if diabetes is poorly controlled, increased risk of periodontitis
Glucovance	Oral drug for the control of diabetes	Hypoglycemia, dizziness, nausea; if diabetes is poorly controlled, increased risk of periodontitis
Haloperidol	Used for treating psychotic disorders and for tics and vocal utterances of Tourette's syndrome	Gingival bleeding, xerostomia, ulcerations, sudden motions of the head, neck, arms, involuntary movements of mouth/tongue, dizziness, orthostatic hypotension
HCTZ (hydro-chlorothiazide)	Diuretic used to treat edema caused by heart failure, cirrhosis; also used to treat high blood pressure	Low blood pressure, dizziness; use of epinephrine or levonordefrin in local anesthetic should be minimized

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Hormone Replacement	Hormone replacement	None
Humalog	Injectable insulin for insulin dependent diabetes	Respiratory tract infection, hypoglycemia, sore throat; if diabetes is poorly controlled, increased risk of periodontitis
Human Insulin NPH	Injectable insulin for insulin dependent diabetes	Respiratory tract infection, hypoglycemia, sore throat; if diabetes is poorly controlled, increased risk of periodontitis
Humulin 70/30	Injectable insulin for insulin dependent diabetes	Oral candidiasis, respiratory tract infection, hypoglycemia, sore throat; if diabetes is poorly controlled, increased risk of periodontitis
Humulin N	Injectable insulin for insulin dependent diabetes	Respiratory tract infection, hypoglycemia, sore throat; if diabetes is poorly controlled, increased risk of periodontitis
Hyzaar	Used to treat high blood pressure	Hypotension
Ibuprofen	Nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain	Xerostomia, dizziness, drowsiness, nausea, heartburn, bleeding
Imipramine	Tricyclic tertiary amine antidepressant	Xerostomia, orthostatic hypotension
Imitrex	Antimigraine drug, serotonin 5-HT agonist	Bad taste, dysphagia, mouth and tongue discomfort
Inderal	Antiarrhythmic beta blocker used to treat high blood pressure, angina, and tremor	Orthostatic hypotension
Indomethacin	Nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain	Xerostomia, ulcerations, dizziness, drowsiness, nausea, heartburn, increased bleeding tendency
Insulin	Injectable insulin for insulin dependent diabetes	Respiratory tract infection, hypoglycemia, sore throat; if diabetes is poorly controlled, increased risk of periodontitis
Ipratropium/albuterol	Bronchodilator with a combination of drugs including a beta ₂ agonist for chronic obstructive pulmonary disease (COPD)	Xerostomia
Irbesartan	Angiotensin II blocker for high blood pressure	Orthostatic hypotension

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Isocarboxazid	An MAOI type antidepressant used to treat major depression.	Orthostatic hypotension, interacts with numerous drugs and tyramine-containing foods.
Isordil	Calcium channel blocker for angina, high blood pressure, rapid heart rhythm	Gingival hyperplasia, dizziness
Itraconazole	Antifungal agent used in immunocompromised patients with oropharyngeal candidiasis	None
Kadian	Analgesic opioid used to treat moderate to severe pain	Xerostomia, caries
Kariva	Birth control	Antibiotics can decrease the effectiveness of oral contraceptives
K-Dur	Potassium supplement used to treat low potassium conditions	Nausea
Keppra	Anticonvulsant to prevent seizures	None
Ketoconazole	Antifungal agent used to treat fungal infections such as oral candidiasis	Numerous drug interactions
Klor-Con	Potassium supplement used to treat low potassium conditions	Nausea
Labetalol	Beta blocker with alpha blocking activity for high blood pressure	Hypertensive crisis, bradycardia,
Lamictal	Anticonvulsant to prevent seizures	Xerostomia
Lamisil	Antifungal agent used to treat fungal infections such as tinea in athlete's foot	Taste disturbance
Lanoxin	Digitalis preparation used to treat congestive heart failure	Sensitive gag reflex, heart rhythm disturbances; use of epinephrine or levonordefrin in local anesthetic should be minimized
Lantus	Injectable insulin for insulin dependent diabetes	Low blood sugar, dizziness
Lasix	Powerful diuretic used to treat edema caused by heart failure, cirrhosis, chronic kidney failure, sometimes used to treat high blood pressure	Hypotension, xerostomia, lichen planus on buccal mucosa/lateral borders of tongue, vomiting, water and electrolyte depletion; use of epinephrine or levonordefrin in local anesthetic should be minimized

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Leflunomide	Treatment for rheumatoid arthritis	Stomatitis, candidiasis, abnormal taste, tooth disorder, gingivitis
Lescol	Cholesterol-lowering medication	None
Levaquin	Antibiotic used to treat sinusitis and urinary tract infections	Oral candidiasis
Levitra	Treatment for erectile dysfunction	If chest pain, no nitroglycerine
Levothroid	Thyroid hormone replacement	None
Levoxyl	Thyroid hormone replacement	None
Lexapro	Treatment of depression and generalized anxiety	Xerostomia, nausea
Lisinopril	Angiotensin-converting enzyme (ACE) inhibitor used to treat high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, orthostatic hypotension, persistent cough, dizziness, fatigue, headache, loss of taste, nausea, vomiting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis, angioedema
Lithium	Used in the management of bipolar affective disorder	Fine hand tremor, dry mouth, altered taste
Loestrin Fe	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Loratadine	Antihistamine with pseudoephedrine	Xerostomia, stomatitis, heart palpitations
Lorazepam	Benzodiazepine antianxiety agent	Xerostomia
Losartan	Angiotensin II receptor blocker used for treating high blood pressure	Orthostatic hypotension
Lotensin	ACE inhibitor used for treating high blood pressure, heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, dizziness, loss of taste, nausea, fainting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis
Lotrel	Used to treat high blood pressure	Hypotension, gingival hyperplasia
Lovastatin	Used to lower cholesterol	None
Low-Ogestrel	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Lunesta	Hypnotic for insomnia	Bad taste, xerostomia

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Lyrica	Analgesic for pain of fibromyalgia and other muscle pain, also an anticonvulsant	Xerostomia
Macrobid	Used to treat or prevent urinary tract infections	Oral candidiasis, nausea
Meclizine	Used for the treatment of nausea, vomiting, and dizziness	Xerostomia, drowsiness
Meloxicam	Nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain	Oral ulcers, xerostomia
Metaxalone	Skeletal muscle relaxant	Dizziness
Metformin	Oral antidiabetic agent	Stress induced hypoglycemia
Methadone	Analgesic opioid for pain and drug withdrawal	Xerostomia, glossitis
Methotrexate	Treatment for rheumatoid arthritis	Ulcerative stomatitis, glossitis
Methylphenidate	CNS stimulant used to treat attention deficit hyperactivity disorder (ADHD) and narcolepsy	Vasoconstrictor precaution
Methylprednisolone	Corticosteroid for systemic anti-inflammatory effects	Ulcerative esophagitis
Metoprolol	Beta blocker for treatment of high blood pressure	Orthostatic hypotension
Metronidazole	Amebicide, antibiotic for <i>Giardia</i> or <i>Flagella</i> infections	Xerostomia, metallic taste, absolutely no alcohol in mouthwash
Miacalcin	Inhibits bone resorption	Rhinitis
Microgestin FE	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Micronase	Oral drug used for the control of diabetes	Hypoglycemia, dizziness, nausea; if diabetes is poorly controlled, increased risk of periodontitis
Minocycline	Broad-spectrum antibiotic (tetracycline derivative), also used to treat periodontitis associated with <i>Actinobacillus actinomycetemcomitans</i>	Dizziness, oral candidiasis, nausea, discoloration of teeth if used in patients under 8 years of age; should not be used in the last half of pregnancy

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
MiraLax	Used to treat occasional constipation and preparation for colonoscopy	Upset stomach
Mircette	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Mirtazapine	Antidepressant	Xerostomia
Mobic	Pain reliever for arthritis	Xerostomia, ulcerative stomatitis
Monopril	ACE inhibitor used for treating high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, dizziness, loss of taste, nausea, fainting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis
Montelukast	Leukotriene inhibitor for maintenance therapy in asthma	Dizziness, dental pain
Motrin	Nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain	Xerostomia, ulcerations, lichen planus on buccal mucosa/lateral borders of tongue, alters coagulation
Mucinex	Expectorant (a medication that promotes elimination of mucus from the lungs)	None
Mycelex	Used for the treatment of local infections with <i>Candida albicans</i> including oral candidiasis	None
Mycostatin	Antifungal for oral candidiasis	None
Nadolol	Beta blocker for high blood pressure	NSAIDs increase hypotensive effects
Naproxen	Nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain	Xerostomia, dizziness, drowsiness, nausea, heartburn, increased bleeding tendency
Nasocort AQ Inhaler	Inhaled corticosteroid for the prevention of nasal allergies	Oral candidiasis, dizziness
Nasonex Inhaler	Inhaled corticosteroid for the prevention of nasal allergies	None
Necon	Birth control	None
Nefazodone	Selective serotonin reuptake inhibitor for treatment of depression	Xerostomia, hypotension

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Neurontin	Anticonvulsant	Dizziness, xerostomia
Nexium	Acid blocker for the prevention of heartburn	Xerostomia, altered taste, oral candidiasis, nausea, dizziness, nervousness
Niaspan	Vitamin used to lower cholesterol	None
Nifedipine	Calcium channel blocker used to prevent angina	Gingival hyperplasia
Nitroglycerine	A nitroglycerin used for the treatment and prevention of angina	Dizziness
Nitrolingual	Lingual aerosol used to treat the symptoms of angina	Dizziness
Nizoral	Antifungal medication used to treat oral candidiasis	None
Nolvadex	Blocks the effect of estrogen on tissue, used for the treatment of invasive breast cancer	Oral candidiasis nausea
Nortriptyline	Tricyclic antidepressant used to treat depression and prevent the fluctuations in mood	Hypotension, xerostomia, oral candidiasis fast heart rate
Norvasc	Calcium channel blocker used to prevent angina	Gingival hyperplasia, xerostomia, altered taste; use of epinephrine or levonordefrin in local anesthetic should be minimized
Olanzapine/ fluoxetine	Combination of selective serotonin reuptake inhibitor with antipsychotic drug. Treatment for bipolar episodes	Xerostomia, tooth decay, taste abnormality
Omeprazole	Proton pump inhibitor for GERD	Xerostomia, esophageal candidiasis, mucosal atrophy
Omnicef	Third generation cephalosporin antibiotic	None
Ortho Evra	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Ortho Novum	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Ortho Tri-Cyclen	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Oxandrin	For weight gain and also for pain with osteoporosis	None
Oxybutynin chloride	Antispasmodic for bladder control	Xerostomia, sedation, nausea
Oxycodone	Narcotic pain reliever for the relief of moderate to moderately severe pain, also a cough suppressant	Xerostomia, sedation, dizziness, nausea
OxyContin	Narcotic pain reliever for the relief of moderate to moderately severe pain, also a cough suppressant	Xerostomia, sedation, dizziness, nausea
Pantoprazole	Proton pump inhibitor for GERD	None
Paroxetine	Antidepressant drug for the management of depression, obsessive-compulsive disorders, panic disorders	Xerostomia, bruxism, nausea, dizziness
Paxil CR	Antidepressant drug for the management of depression, obsessive-compulsive disorders, panic disorders	Xerostomia, bruxism, nausea, dizziness
Penicillin	Antibiotic, only mild to moderate infections are treated with oral penicillin	Oral candidiasis, black hairy tongue
Percocet	Narcotic pain reliever for the relief of moderate to moderately severe pain	Dizziness, nausea, xerostomia
Periostat	Narcotic, broad-spectrum antibiotic for the relief of moderate to moderately severe pain	Oral candidiasis, nausea, discoloration of teeth if used in patients under 8 years of age
Phenergan	Used to prevent motion sickness, nausea or vomiting, itching associated with allergies	Hypotension, xerostomia, dizziness
Phenobarbital	Used to control epilepsy, a sedative to relieve anxiety, sleep aid	Dizziness, nausea
Phenytoin	An antiseizure medication (anticonvulsant) used to prevent seizures	Gingival hyperplasia, dizziness, nausea
Plavix	Inhibits the formation of blood clots, used to prevent strokes and heart attacks in persons who are at high risk	Increased bleeding

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Plendil	Calcium channel blocker used to treat high blood pressure	Gingival hyperplasia, dizziness; use of epinephrine or levonordefrin in local anesthetic should be minimized
Polymox	An antibiotic used to treat infections and for the prevention of bacterial endocarditis	Oral candidiasis, black hairy tongue, dizziness, nausea
Pravachol	Cholesterol-lowering medication	None
Prednisone	An oral corticosteroid used to treat arthritis, colitis, asthma, or bronchitis	Oral candidiasis With long-term use: increased susceptibility to infection, adrenal insufficiency
Premarin	Hormone replacement	Oral candidiasis; increased tendency toward gingival bleeding
Prempro	Hormone replacement	None
Prevacid	Gastric acid inhibitor, GERD	Xerostomia, oral candidiasis, altered taste, aphthous ulcers, stomatitis
Prilosec	Acid blocker (heartburn)	Xerostomia, altered taste, oral candidiasis, nausea, dizziness, nervousness
Prinivil	To treat elevated blood pressure and heart failure	Low blood pressure, dizziness
Procrit	For anemia associated with chemotherapy and blood dyscrasias	None
Progesterone	Hormone replacement	None
Propoxyphene	Narcotic for relief of mild to moderate pain	Xerostomia, dizziness, nausea
Prothazine DC	Antihistamine used to relieve the symptoms of hay fever and other types of allergy	Nervousness, upset stomach
Proscar	Used to treat male pattern hair loss	Swelling of the lips
Protonix	Acid blocker (heartburn)	Xerostomia, altered taste, oral candidiasis, nausea, dizziness, nervousness
Proventil Inhaler	Inhaled bronchodilator used in treating asthma	Fast heart rate, elevated blood pressure, tremor, nausea, nervousness, dizziness, and heartburn, throat irritation
Provera	Progesterone hormone therapy	May increase gingival bleeding
Provigil	Stimulant for narcolepsy	Xerostomia, ulcers, gingivitis

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Prozac	Antidepressant for treatment of depression	Oral candidiasis, xerostomia, hypotension, nausea; can initiate bruxism
Pulmicort Inhaler	Inhaled corticosteroid inhaler progesterone	Oropharyngeal/oral candidiasis
Quinapril	ACE inhibitor used for treating high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, dizziness, loss of taste, nausea, fainting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis
Rabeprazole	Proton pump inhibitor for GERD	None
Raloxifene	For osteoporosis	None
Ramipril	ACE inhibitor used for treating high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, dizziness, loss of taste, nausea, fainting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, increased risk of periodontitis
Ranitidine	Histamine ₂ blocker stops production of HCL acid in GERD	None
Relpax	Treatment for migraine headaches	Xerostomia
Remeron	Antidepressant used for the treatment of depression	Oral candidiasis, xerostomia, hypotension, nausea
Restasis	Immunosuppressant for organ transplant	Gingival hyperplasia and numerous oral manifestations
Retin-A	Topical, used to treat persons with mild to moderate acne	Xerostomia
Rhinocort Aqua	Corticosteroid inhaler/spray for asthma allergy	Oropharyngeal candidiasis
Risperdal	Antipsychotic used for the treatment of psychotic disorders, for example, schizophrenia	Xerostomia, dizziness, sudden, involuntary motions of the head/mouth/tongue; use of epinephrine-containing anesthetic may cause hypotension and rapid heart rate
Ritalin	Used in the treatment of narcolepsy (uncontrollable sleepiness) and in the treatment of children with attention deficit hyperactivity disorder (ADHD)	Hypertension, nervousness, agitation
Roxicet	Narcotic pain reliever for the relief of moderate to moderately severe pain	Dizziness, nausea

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Serevent	Inhaled bronchodilator for the prevention of asthma	Fast heart rate, elevated blood pressure
Seroquel	Antipsychotic agent used to treat severe mental disorders like schizophrenia	Dizziness, xerostomia, involuntary movements of the jaw, lips, and tongue; use of epinephrine-containing anesthetic may cause hypotension and rapid heart rate
Sertraline	Antidepressant for the treatment of depression	Xerostomia, oral candidiasis, hypotension
Singulair	Oral medication used for the treatment of asthma and seasonal allergic rhinitis	Dizziness, sore throat
Skelaxin	Muscle relaxant used for the treatment of muscle spasm	Dizziness, nausea
Slo-Bid	Used for the treatment of asthma, emphysema, and chronic bronchitis	Irritability, nausea
Solu-Cortef	Corticosteroid used for severe allergies, skin problems, asthma, or arthritis	Oral candidiasis with long-term use: increased susceptibility to infection, adrenal insufficiency
Solu-Medrol	Corticosteroid used for severe allergies, skin problems, asthma, or arthritis	Oral candidiasis; with long-term use: increased susceptibility to infection, adrenal insufficiency
Soma	Muscle relaxant for short-term relief of painful muscle conditions and TMJ pain	Dizziness, tremor
Spiriva	Anticholinergic agent for treatment of bronchospasm associated with chronic obstructive pulmonary disease (COPD)	Xerostomia
Statins	Statins are a class of drugs that lower the level of cholesterol	Nausea
Strattera	Oral drug that is used for treating attention deficit hyperactivity disorder (ADHD).	Xerostomia, nausea, dizziness, mood swings
Sumatriptan	For treatment of migraine headaches	Bad taste, dysphagia, mouth and tongue discomfort
Sumycin	Broad-spectrum antibiotic (tetracycline derivative)	Oral candidiasis, nausea, discoloration of teeth if used in patients under eight years of age

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Synthroid	Thyroid replacement	None
Tagamet	Reduces stomach acid production, treatment of ulcers and acid reflux	None
Tamoxifen	Treatment and prevention of breast cancer	Numerous side effects
Tamsulosin	Alpha ₁ adrenergic blocking agent used in men to treat the symptoms of an enlarged prostate	Orthostatic hypotension, tooth disorders
Temazepam	Hypnotic benzodiazepine for insomnia	Xerostomia
Tequin	Antibiotic for bacterial infections	Oral candidiasis
Terazosin	Alpha ₁ adrenergic blocker for high blood pressure	Xerostomia
Tetracycline	Broad-spectrum antibiotic, also used to treat periodontitis associated with <i>Actinobacillus actinomycetemcomitans</i>	Oral candidiasis, nausea, discoloration of teeth if used in patients under eight years of age
Theophylline	Used for the treatment of asthma, emphysema, and chronic bronchitis	Irritability, nausea
Tiazac	Calcium channel blocker used for prevention of angina, treatment of high blood pressure; also to treat abnormally fast heart rhythms	Gingival hyperplasia, dizziness
Timolol	Used for the treatment of glaucoma	None
Tobradex	Used for the treatment of bacterial eye infections	None
Tolterodine	For overactive bladder	Xerostomia
Topamax	Oral drug that is used to prevent the seizures of epilepsy	Can cause gingivitis, speech problems, memory problems
Toprol-XL	Used to treat high blood pressure, angina, and regulating abnormally rapid heart rates	Xerostomia, orthostatic hypotension; use of epinephrine or levonordefrin in local anesthetic should be minimized
Tramadol	Opioid for relief of moderate to severe pain	Xerostomia, dizziness
TriCor	Cholesterol-lowering medication	None
Trimox	Used to treat infections and for the prevention of bacterial endocarditis	Oral candidiasis, black hairy tongue, dizziness, nausea

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Trivora-28	Birth control	Antibiotics taken for dental infections can decrease the effectiveness of oral contraceptives
Tussionex	Cough medicine	None
Tylenol	Acetaminophen used for the relief of pain and fever	None
Tylenol 3	Acetaminophen plus codeine used for the relief of mild to moderately severe pain	Nausea, vomiting
Ultracet	Non-narcotic pain reliever used to for the short-term relief of moderately severe, acute pain	None
Ultram	Non-narcotic pain reliever used for the short-term relief of moderately severe, acute pain	Dizziness, nausea
Valium	Used for relief of anxiety, also used to abort a seizure	Xerostomia, black hairy tongue, loss of balance
Valtrex	Antiviral drug used to treat shingles, genital herpes, and herpes labialis (cold sores)	Nausea
Vasotec	ACE inhibitor used for treating high blood pressure and heart failure and for preventing kidney failure due to high blood pressure and diabetes	Altered taste, xerostomia, dizziness, nausea, fainting; use of epinephrine or levonordefrin in local anesthetic should be minimized; if diabetes is poorly controlled, there is increased risk of periodontitis
Veetids	Antibiotic for treatment of bacterial infections	Oral candidiasis
Ventolin Inhaler	Inhaled bronchodilator used in treating asthma	Fast heart rate, elevated blood pressure, tremor, nausea, nervousness, dizziness, and heartburn, throat irritation
Verelan	Calcium channel blocker for angina, high blood pressure, rapid heart rhythm	Gingival hyperplasia, dizziness; use of epinephrine or levonordefrin in local anesthetic should be minimized
Viagra	Erectile dysfunction	If patient experiences chest pain do not administer nitroglycerin; use of epinephrine or levonordefrin in local anesthetic should be minimized
Vibramycin	Broad-spectrum antibiotic (tetracycline derivative)	Oral candidiasis, nausea, discoloration of teeth if used in patients below 8 years of age

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Vicoprofen	Narcotic analgesic: nonsteroidal anti-inflammatory drug (NSAID) for relief of mild to moderate pain	Xerostomia
Warfarin (Coumadin)	Oral anticoagulant helpful in preventing blood clot formation, used in patients with atrial fibrillation and artificial heart valves to reduce the risk of strokes	Increased bleeding, medical consult
Wellbutrin	Smoking cessation	Xerostomia, hypertensive episodes
Wellbutrin SR or XL	Antidepressant	Hypotension, xerostomia, oral candidiasis
Xalatan	Used for the treatment of glaucoma	None
Xanax	Used for relief of anxiety	Loss of balance, xerostomia
Zantac	Reduces stomach acid production, for treatment of heartburn and ulcers	None
Zestoretic	Used to treat high blood pressure	Hypotension
Zestril	To treat elevated blood pressure and heart failure	Low blood pressure, dizziness; xerostomia, use of epinephrine or levonordefrin in local anesthetic should be minimized, altered taste
Zithromax	Antibiotic for treatment of bacterial infections	Oral candidiasis, vomiting, aphthous ulcers, stomatitis
Zocor	Cholesterol-lowering medicine	Altered taste
Zofran	Treatment for nausea during chemotherapy and after surgery	Xerostomia
Zoloft	Antidepressant used to treat depression, obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder	Hypotension, xerostomia, altered taste, can initiate bruxism
Zovirax	Antiviral used to treat initial genital herpes infections, shingles, and chicken-pox to shorten healing time	Lightheadedness, nausea
Zyban	Nonnicotine medication designed to help smokers quit more easily than without the drug	Dry mouth, swelling of tongue, lips, throat, eyes; seizures, confusion, suicidal thoughts in teenagers, hives, difficulty in breathing, chest pain; rapid heartbeat agitation, dizziness
Zyprexa	Antipsychotic used for treating patients with schizophrenia, Bipolar I disorder	Dizziness, objectionable behavior, orthostatic hypotension; xerostomia, use of epinephrine-containing anesthetic may cause hypotension and rapid heart rate

(continued)

Ready Reference 5-2. Commonly Prescribed Drugs (continued)

DRUG	USE	CONCERNS/ORAL MANIFESTATIONS
Zyrtec	Antihistamine used to treat the signs and symptoms of allergy	Xerostomia, nausea, sore throat
Zyvox	Vancomycin antibiotic used to treat a methicillin-resistant <i>Staphylococcus aureus</i> infection (MRSA)	None

*Ready Reference 5-2. Adapted with permission from Cynthia Biron Leisica, DH Meth-Ed, Inc.

SECTION 3 BRAND NAMES FOR GENERIC DRUGS

Ready Reference 5-3 provides a list of generic drugs with their brand name counterparts. Use it to find the brand name and then refer to Ready Reference 5-2 for the use and oral manifestations by brand name.

Ready Reference 5-3. Generic–Brand Name Cross Reference

	GENERIC NAME	BRAND NAME
A	acetaminophen	Tylenol
	acetaminophen codeine	Tylenol 3
	acetylsalicylic acid	Aspirin
	acyclovir	Zovirax
	albuterol	Alupent Inhaler
	albuterol	Ventolin Inhaler
	albuterol/ipratropium	Combivent Inhaler
	alendronate	Fosamax
	alprazolam	Xanax
	amlodipine	Norvasc
	amlodipine and benazepril	Lotrel
	amitriptyline	Elavil
	amoxicillin	Amoxil
	amoxicillin	Polymox
	amoxicillin	Trimox
	amoxicillin and clavulanic acid	Augmentin
	amphetamine and dextroamphetamine	Adderall XR
	Aspirin/dipyridamole	Aggrenox
	atenolol	Tenormin
	atomoxetine	Strattera
	atorvastatin	Lipitor
	atropine	Phenobarbital
	azathioprine	Azasan
	azelastine	Astelin
	azithromycin	Zithromax
B	barbiturates	Barbita
	benazepril	Lotensin
	benzonatate	Tessalon Perles
	brimonidine	Alphagan
	budesonide	Pulmicort Inhaler

(continued)

Ready Reference 5-3. Generic–Brand Name Cross Reference (continued)

	GENERIC NAME	BRAND NAME
	bupropion	Wellbutrin/Zyban
	buspirone	Buspar
C	calcitonin	Calcimar
	calcitonin	Miacalcin
	candesartan	Atacand
	captopril	Capoten
	carisoprodol	Soma
	carvedilol	Coreg
	cefprozil	Cefzil
	captopril	Capoten
	carbamazepine	Tegretol
	carbidopa/levodopa	Lodosyn
	carisoprodol	Soma
	cefuroxime	Ceftin
	celecoxib	Celebrex
	cephalexin	Keflex
	cetirizine	Zyrtec
	chlorpheniramine and hydrocodone	Tussionex
	chlorpropamide	Orinase
	chlorpropamide	Tolinase
	cimetidine	Tagamet
	ciprofloxacin	Cipro
	citalopram	Celexa
	clarithromycin	Biaxin
	clindamycin	Cleocin
	clonazepam	Klonopin
	clonidine	Catapres
	clopidogrel	Plavix
	clorazepate	Tranxene
	clotrimazole	Lotrimin
	clotrimazole	Mycelex
	colchicine	No brand available
	cyclobenzaprine	Flexeril
	cyclosporine	Sandimmune
D	desipramine	Norpramin
	desoximetasone	Topicort

(continued)

Ready Reference 5-3. Generic–Brand Name Cross Reference (continued)

	GENERIC NAME	BRAND NAME
	dextroamphetamine	Adderall
	diazepam	Valium
	diclofenac	Cataflam
	diclofenac	Voltaren
	didanosine	Videx
	digoxin	Lanoxin
	digoxin oral	Digitek
	diltiazem	Cardizem
	diltiazem	Cartia XT
	diltiazem	Dilacor
	diltiazem	Tiazac
	diphenoxylate	Lomotil
	divalproex	Depakote
	donepezil	Aricept
	doxazosin mesylate	Cardura
	doxycycline	Periostat
	doxycycline	Vibramycin
E	enalapril	Vasotec
	escitalopram	Lexapro
	esomeprazole	Nexium
	estradiol	Climara
	estradiol	Estrace
	estradiol	Estraderm
	etidronate	Didronel
	ezetimibe	Zetia
F	felodipine	Plendil
	fenofibrate	Lipidil
	fenofibrate	TriCor
	fentanyl transdermal	Duragesic
	fexofenadine	Allegra
	fexofenadine and pseudoephedrine	Allegra-D
	finasteride	Propecia
	finasteride	Proscar
	flecainide	Tambocor
	fluconazole	Diflucan
	fluoxetine	Prozac

(continued)

Ready Reference 5-3. Generic–Brand Name Cross Reference (continued)

	GENERIC NAME	BRAND NAME
	fluticasone/salmeterol	Advair Discus
	fluticasone propionate	Flonase
	fluticasone propionate	Flovent Inhaler
	fluvastatin	Lescol
	fosinopril sodium	Monopril
	furosemide	Lasix
G	gabapentin	Neurontin
	gemfibrozil	Lopid
	glimepiride	Amaryl
	glipizide	Glucotrol
	guaifenesin	Fenesin
	guaifenesin	Humibid
	guaifenesin	Mucinex
	guaifenesin	Organidin NR
	guaifenesin	Robitussin
	guanethidine	Ismelin
H	haloperidol	Haldol
	hydrocodone/ibuprofen	Vicoprofen
	hydrocortisone	Orabase
	hydrocortisone	Cortef
	hydrocortisone	Solu-Cortef
	hydroxyzine	Atarax
	hydroxyzine	Vistaril
	hyoscyamine	Anaspaz
	hyoscyamine	Apresoline
	hyoscyamine	Phenobarbital
I	ibuprofen	Advil
	ibuprofen	Motrin
	imipramine	Tofranil
	indinavir	Crixivan
	indomethacin	Indocin
	insulin	Humulin 70/30
	insulin	Humulin N
	insulin glargine	Lantus
	insulin lispro	Humalog
	ipratropium bromide	Atrovent Inhaler

(continued)

Ready Reference 5-3. Generic–Brand Name Cross Reference (continued)

	GENERIC NAME	BRAND NAME
	irbesartan	Avapro
	irbesartan HCTZ	Avalide
	isosorbide dinitrate	Isordil
	isocarboxazid	Marplan
	isosorbide/mononitrate	Imdur
	isosorbide mononitrate	Ismo
K	itraconazole	Sporanox
	ketoconazole	Nizoral
L	lansoprazole	Prevacid
	labetalol	Trandate
	latanoprost	Xalatan
	leflunomide	Arava
	levofloxacin	Levaquin
	levothyroxine sodium	Levothroid
	levothyroxine sodium	Levoxyl
	levothyroxine sodium	Synthroid
	lisinopril	Prinivil
	lisinopril	Zestril
	lisinopril HCTZ	Zestoretic
	lithium	Eskalith
	lithium	Lithobid
	loratadine	Claritin
	loratadine and pseudoephedrine	Claritin-D
	lorazepam	Ativan
	losartan	Cozaar
	losartan and hydrochlorothiazide	Hyzaar
M	meclizine	Antivert
	meclizine	Bonine
	medroxyprogesterone	Provera
	meloxicam	Mobic
	metaxalone	Skelaxin
	metformin	Glucophage
	methadone	Dolophine
	methocarbamol	Robaxin
	methotrexate	Rheumatrex
	methylphenidate	Ritalin

(continued)

Ready Reference 5-3. Generic–Brand Name Cross Reference (continued)

	GENERIC NAME	BRAND NAME
	methyl-prednisolone	Solu-Medrol
	metoclopramide	Reglan
	metoprolol	Lopressor
	metoprolol	Toprol-XL
	metronidazole	Flagyl
	minocycline	Dynacin
	mirtazapine	Remeron
	mometasone	Elocon
	mometasone furoate	Nasonex Inhaler
	monoamine oxidase inhibitor	Marplan
	montelukast	Singulair
	moxifloxacin	Avelox
	mupirocin	Bactroban
N	nabumetone	Relafen
	nadolol	Corgard
	naproxen	Aleve, Anaprox, Naprelan, and Naprosyn
	nefazodone	Serzone
	niacin	Niaspan
	nifedipine	Procardia
	nitrofurantoin	Macrobid
	nitroglycerin	Nitrostat
	nitroglycerin	Nitrolingual
	norethindrone	Aygestin
	nortriptyline	Desipramine
	nystatin	Mycostatin
	olanzapine	Zyprexa
O	omeprazole	Prilosec
	oo-trimoxazole	Cotrim
	oxybutynin	Ditropan XL
	oxycodone	Oxycontin
	oxycodone and acetaminophen	Roxicet
	pantoprazole	Protonix
P	paroxetine	Paxil
	penicillin V	Pen-Vee-K
	penicillin V	Veetids

(continued)

Ready Reference 5-3. Generic–Brand Name Cross Reference (continued)

	GENERIC NAME	BRAND NAME
	phenobarbital	Lumina
	phenytoin	Dilantin
	pimecrolimus	Elidel
	pioglitazone	Actos
	polyethylene glycol	MiraLax
	potassium	Klor-Con
	potassium chloride	K-Dur
	pravastatin	Pravachol
	prednisone	Deltasone
	promethazine	Phenergan
	propoxyphene	Darvon
	propranolol	Inderal
Q	quetiapine	Seroquel
	quinapril	Accupril
R	rabeprazole	AcipHex
	raloxifene	Evista
	ramipril	Altace
	ranitidine	Zantac
	risedronate	Actonel
	risperidone	Risperdal
	rosiglitazone	Avandia
S	salmeterol	Serevent Inhaler
	scopolamine	Phenobarbital
	sertraline	Zoloft
	sildenafil	Viagra
	simvastatin	Zocor
	spironolactone	Aldactone
	sulfamethoxazole and trimethoprim	Bactrim
	sumatriptan	Imitrex
T	tamoxifen	Nolvadex
	tamsulosin	Flomax
	temazepam	Restoril
	terazosin	Hytrin
	tetracycline	Achromycin
	tetracycline	Dynacin
	tetracycline	Endocet

(continued)

Ready Reference 5-3. Generic–Brand Name Cross Reference (continued)

GENERIC NAME	BRAND NAME
tetracycline	Minocycline
tetracycline	Sumycin
theophylline	Slo-Bid
thiazide	Esidrix
timolol	Timoptic
tobramycin and dexamethasone	Tobradex
tolterodine	Detrol
topiramate	Topamax
tramadol	Ultram
tramadol and acetaminophen	Ultracet
trazodone	Desyrel
tretinoin	Retin-A
triamcinolone acetonide inhaler	Nasacort AQ Inhaler
triamterene	Dyrenium
V valacyclovir	Valtrex
valproic acid	Depakote
valsartan	Diovan
venlafaxine	Effexor
verapamil	Calan
verapamil	Isoptin
verapamil	Verelan
Z zolpidem	Ambien

SECTION 4 MODULE RESOURCES

INTERNET RESOURCE: Patient Informational Sheet on Antibiotic Premedication Website of the American Heart Association has a patient informational sheet regarding antibiotic premedication for dental treatment that can be downloaded in a PDF format.

http://www.prehndental.com/assets/pdf/Premedication_Guidelines.pdf

MODULE REFERENCE

1. Wilson W, et al. Prevention of infective endocarditis: guidelines from the American Heart Association: a guideline from the American Heart Association Rheumatic Fever, Endocarditis, and Kawasaki Disease Committee, Council on Cardiovascular Disease in the Young and the Council on Clinical Cardiology, Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Outcomes Research Interdisciplinary Working Group. *Circulation* 2007;116(15):1736–1754.
(<http://circ.ahajournals.org/cgi/content/full/116/15/1736>)

MODULE 6

Dental Health History

MODULE OVERVIEW

The dental health history provides information about the patient's past and present dental experiences. The information gathered from taking the dental health history allows the clinician to determine whether dental treatment alterations are necessary for the patient to safely undergo dental treatment.

This module reviews the kinds of information commonly found on dental health history questionnaires.

MODULE OUTLINE

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SKILL GOALS

- Recognize the importance of the dental health history in planning and preparing for patient/client treatment activities.
- Given a dental health history questionnaire, identify those elements that would be important in modifying the planned treatment.

SECTION 1 ADULT DENTAL HEALTH HISTORY QUESTIONNAIRE

A **dental health history** provides a record of a patient's previous dental experiences. Like the medical history, the dental health history is essential in providing safe dental care for the patient. The dental health history is a quick and effective way to obtain important information about the patient's past and present dental experiences. Most dental practices will utilize a "*Dental Health History Questionnaire*" to obtain relevant information from the patient.

The information requested in a "dental health history" varies significantly depending on the type of dental practice. For example, a general dental practitioner may use a dental history questionnaire that covers a broad range of dental conditions, while an office specializing in pedodontics, orthodontics, cosmetic dentistry, periodontics, prosthodontics, or oral surgery may utilize a dental history format that is more narrowly focused to that dental specialty. An Internet search of the key words: "*dental health history*" will provide literally hundreds of examples of questionnaires used by various dental practices, all have similarities, but no two are exactly the same.

The dental health questionnaire is a highly effective tool permitting the dental team to quickly identify the patient's potential dental needs and risks. Information gained from the questionnaire can be addressed more carefully and thoroughly at chairside. In addition, the questionnaire can provide opportunities for enriched communication opportunities for the dental team related to addressing potential dental anxiety, oral hygiene/preventive therapy regimens, dietary counseling, esthetic considerations, as well as treatment alternatives.

It is always assumed that the dental health history provides supplemental information important to the dental practice team AND is always used in the context of having first taken a complete medical history. The dental health history is never used independent of the medical health history.

QUESTIONNAIRE FORMAT

There is no standardized format for a dental health questionnaire; however, along with fill-in-the-blank type questions many questionnaires utilize one of the following formats:

The figure displays three distinct questionnaire response formats, each within a yellow rectangular box. The first format, labeled 'Check one:', shows 'YES' with a checkmark and 'NO' with an empty line. The second format, labeled 'Mark one:', shows 'YES' with a checked checkbox and 'NO' with an unchecked checkbox. The third format, labeled 'Circle one:', shows 'YES' circled and 'NO' as a plain text option.

Check one: YES ☒ NO ☐

Mark one: ☒ YES ☐ NO

Circle one: YES NO

Figure 6-1. Questionnaire Formats. Common questionnaire formats include the use of checkmarks, boxes, and circling the correct answer.

REASON FOR APPOINTMENT

For a new patient, the dental health questionnaire very likely would include some of the following general elements:

Reason for Today's Visit/Chief Complaint	
What is the main reason for your visit today? _____	Have you had X-rays of your teeth taken recently? NO YES, when: _____
Have you seen another dentist within the last year? _____	How did you hear of our practice? _____
When was your last dental visit? _____	Referred by: _____
Reason for the above visit? _____	
Name of previous dentist: _____	

Figure 6-2. Reason for Appointment. Questions, such as these, commonly are found on a dental questionnaire regarding the reason for the appointment.

PREVIOUS DENTAL EXPERIENCES

Many dental questionnaires attempt to identify whether or not the patient has had any previous negative dental experiences, which might require special considerations, such as antianxiety premedication, IV sedation, or nitrous oxide sedation. Some examples of the types of questions that could be used to elicit information about negative dental experiences are listed below.

Tell Us About Your Previous Dental Experiences			
Have your previous dental visits been favorable/comfortable emotionally? YES NO If yes, please explain: _____	Have you ever had any allergic reactions associated with dental treatment? YES NO If yes, please explain: _____		
In general, do you feel positive about your previous dental treatment? YES NO If yes, please explain: _____	Have you ever had difficulty with local anesthetic injections? YES NO If yes, please explain: _____		
Have you ever had an adverse reaction to dental treatment? YES NO If yes, please explain: _____	Other dental experiences we should know about? YES NO If yes, please explain: _____		

Figure 6-3. Previous Dental Experiences. A dental questionnaire should include questions about the patient's previous experiences with dental care.

Tell Us About Your Previous Dental Experiences											
On a scale of 0 (very low) to 10 (very high), how would you rate:											
Your ability to care for your teeth and gums?						Interest in reducing continuing dental expenses?					
0	1	2	3	4	5	0	1	2	3	4	5
Past or previous dental experiences?						Your dental fear or anxiety?					
0	1	2	3	4	5	0	1	2	3	4	5
Interest in preventing dental disease?											
0	1	2	3	4	5						

Figure 6-4. Previous Dental Experiences. An alternative way of obtaining information about previous dental experiences is to use a scale assessment, either 0–5 or 0–10.

DENTAL CONCERNS

The next section of the dental health questionnaire generally involves identifying specific potential dental concerns that the patient may have regarding possible treatment options. These questions can be used to focus the dental team on issues that the patient feels are important. Examples of typical questions include:

Tell Us About Any Dental Concerns You May Have			
Are you satisfied with your teeth and their appearance?	YES	NO	A lot can be done to prevent dental diseases (teeth and gum disease).
If yes, please explain: _____			Would you like to know more about preventing dental disease for yourself or your family?
Are you interested in having your teeth a lighter color?	YES	NO	If yes, please explain: _____
If yes, please explain: _____			
Are you interested in any specific type of dental treatment at this time?	YES	NO	Do you feel your present oral hygiene is effective in cleaning your mouth?
Please circle all that apply: implants, cosmetic dentistry, replacing missing teeth, dentures, replacing old fillings, other dental treatments			If yes, please explain _____

Figure 6-5. Patient's Dental Concerns. The dental questionnaire should include questions about the patient's dental concerns.

The above elements of the dental health questionnaire permit a general overview of the patient's past dental experiences as well as an opportunity for the patient to identify areas he or she feels needs to be addressed by the dentist. These types of questions provide the clinician with a potential "head's up" regarding whether or not this patient has had prior positive or negative dental experiences and alerts the clinician to any potential problems with local anesthesia, the need for anxiety premedication and

other important treatment considerations. The preceding questions, however, do not provide an opportunity for the dental health team to focus on specific, common dental problems and symptoms. The next section of the dental health questionnaire will vary from one office to the next depending on the focus of the practice and represents an opportunity for the dental team to quickly identify existing dental conditions that may require consideration. Examples of the types of questions are provided below and are typically presented in a check the line/box type of format.

EXISTING DENTAL CONDITIONS

Existing Dental Needs and Conditions	
<i>Please indicate with a check if you have had or have any of the following:</i>	
☐ Sensitive teeth	☐ Removal of teeth
☐ Hot	☐ Sores or growths
☐ Cold	☐ Dry mouth
☐ Sweet	☐ Pain upon swallowing
☐ Pressure	☐ Grinding or clenching teeth
☐ Broken teeth or fillings	☐ Persistent headaches, ear aches, or muscle pain
☐ Joint pain or popping or clicking of jaw	☐ Bad breath, or bad taste in mouth
☐ Gum boils or other infections	☐ Food catches between teeth when you eat
☐ Swollen/painful or bleeding gums	☐ Loose teeth
☐ Gum recession	☐ Denture or partial denture
☐ Periodontal treatments (gum)	☐ Your bite is changing
☐ Frequent filling replacement	☐ Problems chewing
☐ Discolored teeth	☐ Sore jaws upon awakening. How frequently:
☐ Crooked teeth	☐ Do you prefer to breathe through your
☐ Orthodontic treatment (braces)	☐ ☐ nose or ☐ mouth?
☐ Injury to the face, jaws, teeth	☐ Abnormal swallowing habit - tongue thrusting
☐ Root canal therapy	☐ Biting your lip or cheek frequently

Figure 6-6. Existing Dental Needs and Conditions. Information should be gathered about existing dental needs and conditions.

DAILY SELF-CARE

Other helpful elements in a dental health questionnaire may relate to identifying the patient's home care/self-care effectiveness. Questions such as the following would be typical:

Daily Self-Care Activities	
On a daily basis, how many times do you brush your teeth? <i>(please circle)</i>	What type of toothbrush do you use?
Brush only 0 1 2 3 4+	☐ Hard ☐ Medium
Floss only 0 1 2+	☐ Soft ☐ Don't know
Brush and floss 0 1 2 3+	Do you use any other dental aids on a regular basis?
☐ Do not routinely brush or floss on a daily basis	☐ Bridge cleaners ☐ Proxabrush
	☐ Stimudents ☐ Other
	☐ Rubber tip

Figure 6-7. Daily Self-Care Activities. It is helpful to gather information about the patient's current daily self-care habits.

DIETARY HABITS

Some dental health questionnaires specifically address dietary activities that might potentially have a significant negative impact on dental health. For example, a history of consuming sugary drinks may increase the risk of dental decay.

Dietary Activities	
<i>Please circle:</i>	
How many caffeinated beverages do you drink daily? 0 1 2 3 4+ less than 2-3/week	How many "sport/energy" beverages do you drink daily? 0 1 2 3 4+ less than 2-3/week
How many alcoholic beverages do you drink daily? 0 1 2 3 4+ less than 2-3/week	How many candy bars or energy/power bars do you eat daily? 0 1 2 3 4+ less than 2-3/week
How many sugar-containing carbonated beverages do you drink daily? 0 1 2 3 4+ less than 2-3/week	Do you regularly eat hard candies or breath mints? YES NO Occasionally
How many "diet" sugar substitute carbonated beverages do you drink daily? 0 1 2 3 4+ less than 2-3/week	Do you regularly use tobacco products? YES NO Occasionally
	Do you use recreational/street drugs? YES NO Occasionally

Figure 6-8. Dietary Activities. Information about dietary habits that could be a contributing factor in dental disease can be helpful to the clinician.

SECTION 2 CHILD DENTAL HEALTH HISTORY QUESTIONNAIRE

For offices that treat young children, a special children's dental health questionnaire is required. A typical children's dental health history would include some of the following elements:

Children's Dental Health Questionnaire	
Is this your child's first visit to a dentist? YES NO	PREVENTIVE DENTAL HISTORY
Do you anticipate that your child will be cooperative? YES NO	How often does your child brush? _____
If this is not your child's first visit, has his/her previous dental experience been: (circle one) Positive Negative	Is the child's brushing supervised? YES NO
REASON FOR VISIT	Does the child use dental floss? YES NO
What is the main purpose of your visit today? _____	CHILD'S HABITS
Has your child bumped or cracked any front teeth? NO YES, when? _____	Does your child have a nighttime bottle? YES NO
Has your child ever complained of head-ache, pain, popping, or clicking of the jaws? YES NO	Does your child do any of the following:
FLUORIDE EXPOSURE	Grinding teeth: How long _____ Still active? YES NO
Is your water supply at home fluoridated? YES NO Don't know	Thumb sucking: How long _____ Still active? YES NO
Does your child take any of the following? (circle all appropriate) Fluoride tablets Fluoride drops Fluoride in vitamins	Finger habit: How long _____ Still active? YES NO
	Pacifier: How long _____ Still active? YES NO
	Other (lip, cheek, nail biting, or biting on foreign objects—pencils, etc.): How long _____ Still active? YES NO

Figure 6-9. Children's Dental Health Questionnaire. These questions are examples of the questions that would be helpful on a children's health questionnaire.

SECTION 3 PEAK PROCEDURE

Procedure 6-1. Review of Dental Health History Questionnaire

ACTION	RATIONALE
1. Read through every line and check box. Are all the questions answered?	Complete information is important to protect the patient's health.
2. Can you understand what is written?	Make a note to ask the patient about anything that is not clear.
3. Did the patient, parent, or guardian sign and date the form?	The dental history must be signed and dated.
4. Read through the form. Circle concerns in red pencil—such as problems the patient has experienced in the past with dental treatment.	Discuss concerns during the patient interview and later with your clinical instructor.
5. Read through handwritten responses made by the patient. Circle concerns in red pencil.	Discuss concerns during the patient interview and later with your clinical instructor.
6. Identify any dental treatment alterations that might be necessary for treatment of this patient.	Examples of treatment alterations include anti-anxiety medication prior to appointment or use of latex-free gloves for a patient who has experienced an adverse reaction to latex gloves during previous dental treatment.

SECTION 4 READY REFERENCES

Dental Health Questionnaire

Patient _____ Date _____

Student _____

REASON FOR TODAY'S VISIT - CHIEF COMPLAINT

What is the main reason for your visit today? _____

How did you hear about our practice? _____

Referred by: _____

PREVIOUS DENTAL TREATMENT

Have you seen another dentist within the last year? _____

Name of previous dentist? _____

When was your last dental visit? _____

Have you had x-rays of your teeth taken ☐ Yes ☐ No recently?

Reason for the above visit? _____

TELL US ABOUT YOUR PREVIOUS DENTAL EXPERIENCES

Have your previous dental visits been favorable/comfortable emotionally? ☐ Yes ☐ No

If no, please explain: _____

Have you ever had any allergic reactions associated with dental treatment? ☐ Yes ☐ No

If yes, please explain: _____

In general, do you feel positive about your previous dental treatment? ☐ Yes ☐ No

If no, please explain: _____

Have you ever had difficulty with local anesthetic injections? ☐ Yes ☐ No

If yes, please explain: _____

Have you ever had an adverse reaction to dental treatment? ☐ Yes ☐ No

If yes, please explain: _____

Other dental experiences we should know about? _____

TELL US ABOUT ANY DENTAL CONCERNS YOU MAY HAVE

Are you satisfied with your teeth and their appearance? ☐ Yes ☐ No

If no, please explain: _____

Are you interested in having your teeth a lighter color? ☐ Yes ☐ No

If yes, please explain: _____

Are you interested in any specific type of dental treatment at this time?

- ☐ Implants
- ☐ Cosmetic dentistry
- ☐ Replacing missing teeth
- ☐ Dentures
- ☐ Replacing old fillings
- ☐ Other _____

A lot can be done to prevent dental diseases (teeth and gum disease). Would you like to know more about preventing dental disease for yourself or your family? ☐ Yes ☐ No

If yes, please explain: _____

Figure 6-10A. Adult Dental Health Questionnaire in English. Page 2 of an adult dental health questionnaire in English.

Dental Health Questionnaire (cont)

EXISTING DENTAL NEEDS/CONDITIONS

Please indicate with a check if you have had or have any of the following:

- | | |
|---|--|
| ☐ Sensitive teeth | ☐ Removal of teeth |
| ☐ Hot | ☐ Sores or growths |
| ☐ Cold | ☐ Dry mouth |
| ☐ Sweet | ☐ Pain upon swallowing |
| ☐ Pressure | ☐ Grinding or clenching teeth |
| ☐ Broken teeth or fillings | ☐ Persistent headaches, ear aches, or muscle pain |
| ☐ Joint pain or popping or clicking of jaw | ☐ Bad breath, or bad taste in mouth |
| ☐ Gum boils or other infections | ☐ Food catches between teeth when you eat |
| ☐ Swollen/painful or bleeding gums | ☐ Loose teeth |
| ☐ Gum recession | ☐ Denture or partial denture |
| ☐ Periodontal treatments (gum) | ☐ Your bite is changing |
| ☐ Frequent filling replacement | ☐ Problems chewing |
| ☐ Discolored teeth | ☐ Sore jaws upon awakening. How frequently: _____ |
| ☐ Crooked teeth | Do you prefer to breathe through your |
| ☐ Orthodontic treatment (braces) | ☐ nose or ☐ mouth? |
| ☐ Injury to the face, jaws, teeth | ☐ Abnormal swallowing habit - tongue thrusting |
| ☐ Root canal therapy | ☐ Biting your lip or cheek frequently |

DAILY SELF-CARE ACTIVITIES

Do you feel your present daily self-care ☐ Yes ☐ No is effective in cleaning your mouth?

If no, please explain _____

On a daily basis, how many times do you brush your teeth? (please circle)

Brush only 0 1 2 3 4+

Floss only 0 1 2+

Brush and floss 0 1 2 3+

☐ Do not routinely brush or floss on a daily basis

What type of toothbrush do you use?

- ☐ Hard
☐ Medium
☐ Soft
☐ Don't know

Do you use any other dental aids on a regular basis?

- ☐ Bridge cleaners
☐ Stimudents
☐ Rubber tip
☐ Proxabrush
☐ Other _____

DIETARY ACTIVITIES

Please circle:

How many caffeinated beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many alcoholic beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many sugar-containing sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "diet" sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "sport/energy" beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many candy bars or energy/power bars do you eat daily?

0 1 2 3 4+ less than 2-3/week

Do you regularly eat hard candies or breath mints?

☐ Yes ☐ No ☐ Occasionally

Do you regularly use tobacco products?

☐ Yes ☐ No ☐ Occasionally

Do you use recreational/street drugs?

☐ Yes ☐ No ☐ Occasionally

Signature of Patient _____

Date _____

Reviewed by _____

Date _____

Figure 6-10B. Adult Dental Health Questionnaire in English. Page 2 of an adult dental health questionnaire in English.

Cuestionario de Salud Oral

Paciente _____

Fecha _____

Estudiante _____

RAZON POR LA VISITA DE HOY - QUEJA PRINCIPAL

¿Cuál es la razón principal de su visita de hoy? _____

¿Cómo se entero usted de nuestra oficina dental? _____

Referido/recomendado por: _____

TRATAMIENTO DENTAL PREVIO

¿Ha visto a otro dentista durante el último año? _____

Nombre de su dentista previo: _____

¿Cuándo fue su última visita dental? _____

¿Recientemente, le han tomado radiografías (rayos x) de sus dientes? ☐ Sí ☐ No

¿Razón por su visita mencionada en previa pregunta? _____

DIGANOS DE SUS PREVIAS EXPERIENCIAS DENTALES

¿Han sido sus previas visitas dentales favorables/comfortables emocionalmente? ☐ Sí ☐ No

Si su respuesta es No, por favor explique: _____

¿Alguna vez ha tenido usted alguna reacción alérgica relacionada con tratamiento dental? ☐ Sí ☐ No

Si su respuesta es Sí, por favor explique: _____

¿Por lo general, se siente usted positivo sobre su previo tratamiento dental? ☐ Sí ☐ No

Si su respuesta es No, por favor explique: _____

¿Ha tenido alguna dificultad con inyecciones de anestesia local? ☐ Sí ☐ No

Si su respuesta es Sí, por favor explique: _____

¿Alguna vez a tenido usted una reacción adversa al tratamiento dental? ☐ Sí ☐ No

Si su respuesta es Sí, por favor explique: _____

¿Otras experiencias dentales que debemos saber de? _____

DIGANOS DE CUALQUIER INQUIETUDE/PREOCUPACION DENTAL QUE PUEDA USTED TENER

¿Está satisfecho con sus dientes y la apariencia de sus dientes? ☐ Sí ☐ No

Si su respuesta es No, por favor explique: _____

¿En este momento está usted interesado en algún tipo específico de tratamiento dental?

☐ Implantes☐ Estética dental☐ Reemplazar dientes que faltan☐ Dentadura postiza☐ Reemplazar un empaste/relleno viejo☐ Otro _____¿Está usted interesado en tener sus dientes de un color más claro? ☐ Sí ☐ No

Si su respuesta es Sí, por favor explique: _____

Mucho se puede hacer para prevenir enfermedades dentales (de los dientes y las encías). ¿Le gustaría aprender más sobre como prevenir enfermedades dentales para usted o su familia? ☐ Sí ☐ No

Si su respuesta es Sí, por favor explique: _____

Figure 6-11A. Adult Dental Health Questionnaire in Spanish. Page 1 of an adult dental health questionnaire in Spanish.

Cuestionario de Salud Oral (cont)

NECESIDADES/CONDICIONES DENTALES EXISTENTES

Favor de indicar marcando si ha tenido o tiene cualquiera de lo siguiente:

- | | |
|--|--|
| ☐ Dientes sensitivos:
☐ Caliente
☐ Frío
☐ Dulce
☐ Presión
☐ Dientes quebrados o rellenos/empastados
☐ Dolor en la coyuntura o que se le haya salido o ruido o chaquido de la mandíbula
☐ Granos en la encía o otras infecciones
☐ Encías inflamadas/con dolor o sangrando
☐ Encías en recesión
☐ Tratamientos periodontal (encías)
☐ Frecuente reemplazo de empastado/relleno
☐ Dientes descoloridos
☐ Dientes chuecos
☐ Tratamientos de ortodoncia (frenos)
☐ Daños a la cara, quijada/mandíbula, dientes
☐ Terapia root canal | ☐ Sacaron dientes
☐ Llagas o bulto/tumor
☐ Boca seca
☐ Dolor al tragar
☐ Rechina o aprieta sus dientes
☐ Dolor de cabeza, oído o muscular persistente
☐ Mal aliento o mal sabor en la boca
☐ Comida se queda entre los dientes cuando come
☐ Dientes sueltos
☐ Dentadura postiza o dentadura parcial
☐ Cambios al morder
☐ Problemas para masticar satisfactoriamente
☐ Despierta con dolor de mandíbula
¿Si sí, con que frecuencia? _____
Prefiere usted respirar por ☐ la nariz o ☐ la boca?
☐ Tragar anormal - empujar con la lengua
☐ Muerde el labio o la mejilla con frecuencia |
|--|--|

ACTIVIDADES DIARIAS DE CUIDADO PERSONAL

- | | |
|--|---|
| <p>¿Piensa usted que su actual cuidado dental personal es efectivo para limpiar su boca? ☐ Sí ☐ No</p> <p>Si su respuesta es No, por favor explique: _____</p> <p>_____</p> <p>¿En un día normal, cuántas veces se cepilla sus dientes? (por favor marque con un círculo)</p> <p>Sólo se cepilla 0 1 2 3 4+</p> <p>Hilo dental 0 1 2+</p> <p>Cepillar e hilo dental 0 1 2 3+</p> <p>☐ De manera rutinaria no me cepillo o uso el hilo dental todos los días</p> | <p>¿Que tipo de cepillo de dientes usa?</p> <p>☐ Duro
 ☐ Mediano
 ☐ Blando
 ☐ No sé</p> <p>¿Utiliza diariamente otro tipo de auxiliar dental?</p> <p>☐ Limpiadores de puentes dentales
 ☐ Stimudents
 ☐ Rubber tip
 ☐ Proxabrush
 ☐ Otro _____</p> |
|--|---|

ACTIVIDADES DIETÉTICAS

Por favor marque con un círculo:

- | | |
|---|---|
| <p>¿Cuántas bebidas con cafeína bebe diariamente?</p> <p>0 1 2 3 4+ menos de 2-3/a la semana</p> <p>¿Cuántas bebidas alcohólicas bebe diariamente?</p> <p>0 1 2 3 4+ menos de 2-3/a la semana</p> <p>¿Cuántas bebidas gaseosas/refrescos con azúcar bebe diariamente?</p> <p>0 1 2 3 4+ menos de 2-3/a la semana</p> <p>¿Cuántas bebidas gaseosas/refrescos dietético bebe diariamente?</p> <p>0 1 2 3 4+ menos de 2-3/a la semana</p> <p>¿Cuántas bebidas "deportivas/energéticas" bebe diariamente?</p> <p>0 1 2 3 4+ menos de 2-3/a la semana</p> | <p>¿Cuántos dulces o barras energéticas come diariamente?</p> <p>0 1 2 3 4+ menos de 2-3/a la semana</p> <p>¿Regularmente usa dulces fuertes o mentas para el aliento?</p> <p>☐ Sí ☐ No ☐ Ocasionalmente</p> <p>¿Regularmente usa productos de tabaco?</p> <p>☐ Sí ☐ No ☐ Ocasionalmente</p> <p>¿Usa usted drogas recreacionales/comunes?</p> <p>☐ Sí ☐ No ☐ Ocasionalmente</p> |
|---|---|

Firma del paciente _____

Fecha _____

Repasado por _____

Fecha _____

Figure 6-1 IB. Adult Dental Health Questionnaire in Spanish. Page 2 of an adult dental health questionnaire in Spanish.

Children's Dental Health Questionnaire

Patient _____

Date _____

Student _____

Child's age _____

Is this your child's first visit to a dentist? ☐ Yes ☐ No

Date of last visit: _____

If this is not your child's first visit, has his/her previous dental experience been: ☐ Positive ☐ Negative

Do you anticipate that your child will be cooperative? ☐ Yes ☐ No

REASON FOR VISIT

What is the main purpose of your visit today?

Has your child bumped or cracked any front teeth? ☐ Yes ☐ No

If yes, when? _____

Has your child ever complained of headache, pain, popping, or clicking of the jaws? ☐ Yes ☐ No

FLUORIDE EXPOSURE

Is your water supply at home fluoridated?

☐ Yes ☐ No ☐ Don't know

Does your child take any of the following?

☐ Fluoride tablets

☐ Fluoride drops

☐ Fluoride in vitamins

Does your child use fluoridated tooth paste?

☐ Yes ☐ No ☐ Don't know

PREVENTIVE DENTAL HISTORY

How often does your child brush? _____

Is the child's brushing supervised? ☐ Yes ☐ No

Do you feel your child's daily self-care is effective in cleaning the teeth? ☐ Yes ☐ No

If no, please explain _____

On a daily basis, how many times does your child brush? (please circle)

Brush only 0 1 2 3 4+

Floss only 0 1 2+

Brush and floss 0 1 2 3+

☐ Does not routinely brush or floss on a daily basis

Figure 6-12A. Child's Dental Health Questionnaire in English. Page 1 of a children's dental health questionnaire in English.

Children's Dental Health Questionnaire (cont)

CHILD'S EXISTING DENTAL NEEDS/CONDITIONS

Please indicate with a check if your child has had or has any of the following:

- | | |
|---|--|
| ☐ Sensitive teeth | ☐ Removal of teeth |
| ☐ Hot | ☐ Sores or growths |
| ☐ Cold | ☐ Dry mouth |
| ☐ Sweet | ☐ Pain upon swallowing |
| ☐ Pressure | ☐ Grinding or clenching their teeth |
| ☐ Broken teeth or fillings | ☐ Persistent headaches, ear aches, or muscle pain |
| ☐ Joint pain or popping or clicking of jaw | ☐ Bad breath, or bad taste in their mouth |
| ☐ Gum boils or other infections | ☐ Food catches between teeth when you eat |
| ☐ Swollen/painful or bleeding gums | ☐ Loose teeth |
| ☐ Frequent filling replacement | ☐ Problems with chewing |
| ☐ Discolored teeth | ☐ Sore jaws upon awakening. How frequently: _____ |
| ☐ Crooked teeth | Do they prefer to breathe through their: |
| ☐ Orthodontic treatment (braces) | ☐ nose or ☐ mouth? |
| ☐ Injury to the face, jaws, teeth | ☐ Abnormal swallowing habit - tongue thrusting |
| ☐ Root canal therapy | ☐ Biting their lip or cheek frequently |

DIETARY ACTIVITIES

Please circle:

How many caffeinated beverages does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many sugar-containing sodas does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many "diet" sodas does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many "sport/energy" beverages does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many candy bars or energy/power bars does your child eat daily?

0 1 2 3 4+ less than 2-3/week

HABITS

Does your child have a nighttime bottle? ☐ Yes ☐ No

Does your child do any of the following:

☐ Grinding teeth: Still active? ☐ Yes ☐ No

How long _____

☐ Thumb sucking: Still active? ☐ Yes ☐ No

How long _____

☐ Finger habit: Still active? ☐ Yes ☐ No

How long _____

☐ Lip biting: Still active? ☐ Yes ☐ No

How long _____

☐ Cheek biting: Still active? ☐ Yes ☐ No

How long _____

☐ Nail biting: Still active? ☐ Yes ☐ No

How long _____

☐ Biting on foreign objects such as pencils: Still active? ☐ Yes ☐ No

How long _____

Signature of Parent or Legal Guardian _____ Date _____

Reviewed by _____ Date _____

Figure 6-12B. Child's Dental Health Questionnaire in English. Page 2 of a children's dental health questionnaire in English.

Cuestionario de Salud Oral para Niños/as

Paciente _____

Fecha _____

Estudiante _____

Edad de niño _____

¿Es esta la primera visita al dentista de su niño/a? ☐ Sí ☐ No

Fecha de la última visita dental: _____

Si esta no es la primera visita de su niño/a, ha sido la previa experiencia dental: ☐ Positiva ☐ Negativa

¿Anticipa usted que su niño/a cooperará? ☐ Sí ☐ No

RAZON POR SU VISITA

¿Cuál es la razón principal de su visita de hoy?

¿Ha el/la niño/a golpeado o quebrado cualquier de los dientes frontales? ☐ Sí ☐ No

¿Si sí, cuando? _____

¿Ha el/la niño/a alguna vez quejado de dolor de cabeza, dolor, que se le haya salido o chasquido/ruido en la mandíbula? ☐ Sí ☐ No

CONTACTO CON EL FLUORURO

¿Esta el agua en su casa fluorizada?

☐ Sí ☐ No ☐ No sé

¿Usa su niño/a pasta/goma de dientes conteniendo fluoruro?

☐ Sí ☐ No ☐ No sé

¿Toma su niño/a algunos de los siguientes?

☐ Tabletas de fluoruro

☐ Gotas de fluoruro

☐ Vitaminas de fluoruro

HISTORIA DENTAL PREVENTIVO

¿Qué tan frecuente se cepilla los dientes su niño/a? _____

¿Es supervisado/a su niño/a cuando se cepilla? ☐ Sí ☐ No

¿Piensa usted que su actual cuidado dental de su niño/a es efectivo para limpiar su boca? ☐ Sí ☐ No

Si no, por favor explique: _____

¿En un día normal, cuántas veces se cepilla sus dientes su niño/a? (por favor marque con un círculo)

Sólo se cepilla 0 1 2 3 4+

Hilo dental 0 1 2+

Cepillar e hilo dental 0 1 2 3+

☐ De manera rutinaria no me cepillo o uso el hilo dental todos los días

Figure 6-13A. Child's Dental Health Questionnaire in Spanish. Page 1 of a children's dental health questionnaire in Spanish.

Cuestionario de Salud Oral para Niños/as (cont)

NECESIDADES/CONDICIONES DENTALES EXISTENTES DE SU NIÑO/A

Favor de indicar marcando si ha tenido o tiene cualquiera de lo siguiente:

- | | |
|---|---|
| ☐ Dientes sensitivos: | ☐ Sacaron dientes |
| ☐ Caliente | ☐ Llagas o bulto/tumor |
| ☐ Frío | ☐ Boca seca |
| ☐ Dulce | ☐ Dolor al tragar |
| ☐ Presión | ☐ Rechina o aprieta sus dientes |
| ☐ Dientes quebrados o rellenos/empastados | ☐ Dolor de cabeza, oído, o muscular persistente |
| ☐ Dolor en la coyuntura o que se le haya salido o ruido o chaquido de la mandíbula | ☐ Mal aliento o mal sabor en la boca |
| ☐ Granos en la encía u otras infecciones | ☐ Comida se queda entre los dientes cuando come |
| ☐ Encías inflamadas/con dolor o sangrando | ☐ Dientes sueltos |
| ☐ Frecuente reemplazo de empastado/relleno | ☐ Problemos masticar satisfactoriamente |
| ☐ Dientes descoloridos | ☐ Despierta con dolor de mandíbula |
| ☐ Dientes chuecos | ☐ ¿Si sí, con que frecuencia? _____ |
| ☐ Tratamientos de ortodoncia (frenos) | ☐ Prefiere usted respirar por ☐ la nariz o ☐ la boca |
| ☐ Daños a la cara, quijada/mandíbula, dientes | ☐ Tragar anormal - empujar con la lengua |
| ☐ Terapia root canal | ☐ Muerde el labio o la mejilla con frecuencia |

ACTIVIDADES DIETETICAS

Por favor marque con un círculo:

¿Cuántas bebidas con cafeína bebe su niño/a diariamente?

0 1 2 3 4+ menos de 2-3/a la semana

¿Cuántas bebidas gaseosas/refrescos conteniendo azúcar bebe su niño/a diariamente?

0 1 2 3 4+ menos de 2-3/a la semana

¿Cuántas bebidas gaseosas/refrescos con sustituto de azúcar dietético bebe su niño/a diariamente?

0 1 2 3 4+ menos de 2-3/a la semana

¿Cuántas bebidas "deportivas"/ "energéticas" bebe su niño/a diariamente?

0 1 2 3 4+ menos de 2-3/a la semana

¿Cuántos dulces o barras energéticas come su niño/a diariamente?

0 1 2 3 4+ menos de 2-3/a la semana

HABITOS

¿Tiene su niño/a un biberón/mamila nocturna? ☐ Sí ☐ No

Hace su niño/a cualquiera de lo siguiente:

☐ Rechinar los dientes: ¿Aún activo? ☐ Sí ☐ No

¿Por cuanto tiempo? _____

☐ Chupar el dedo: ¿Aún activo? ☐ Sí ☐ No

¿Por cuanto tiempo? _____

☐ Habito del dedo: ¿Aún activo? ☐ Sí ☐ No

¿Por cuanto tiempo? _____

☐ Chupón/chupete: ¿Aún activo? ☐ Sí ☐ No

¿Por cuanto tiempo? _____

☐ Morder el lavio o: ¿Aún activo? ☐ Sí ☐ No
la mejilla:

¿Por cuanto tiempo? _____

☐ Morder las uñas: ¿Aún activo? ☐ Sí ☐ No

¿Por cuanto tiempo? _____

☐ Morder un objeto extraño como un lapiz: ¿Aún activo? ☐ Sí ☐ No

¿Por cuanto tiempo? _____

Firma de los padres o guardian legal _____ Fecha _____

Revisado por _____ Fecha _____

Figure 6-13B. Child's Dental Health Questionnaire in Spanish. Page 2 of a children's dental health questionnaire in Spanish.

SECTION 5 THE HUMAN ELEMENT

TABLE 6-1. English to Spanish Phrase List for Dental History

Good morning (afternoon), Mr. _____.	Buenos días (tardes), señor _____.
Good morning (afternoon), Mrs. _____.	Buenos días (tardes), señora _____.
Good morning (afternoon), Miss _____.	Buenos días (tardes) señorita _____.
My name is _____. I am your dental hygienist.	Mi nombre es _____. Soy su higienista dental.
It is nice to meet you.	Mucho gusto en conocerlo (conocerla).
I do not speak Spanish, I will point to Spanish phrases.	No hablo español; Voy a indicar las frases en español.
Please answer the questions on this form about your dental health.	Por favor responda a las preguntas en este formulario sobre su salud dental.
Please answer the questions on this form about your child's dental health.	Por favor responda a las preguntas en este formulario sobre la salud dental de su niño.
Has the dentist ever given you anything to help you be less anxious about your dental appointment?	¿Usted ha tomado algún calmante recetado por el dentista para estar menos ansioso sobre su cita dental?
You forgot to answer this question.	Se olvidó responder a esta pregunta.
Please sign here.	Por favor firme aquí.
Wait here, I will get the dentist or instructor.	Espere aquí; voy a buscar al dentista o al profesor.
We are finished for today.	Hemos terminado por hoy.
We will schedule your next appointment.	Vamos a hacer una nueva cita.
Goodbye, see you next time.	Hasta luego; La (Lo) veremos la próxima cita.

SECTION 6 PRACTICAL FOCUS—FICTITIOUS PATIENT CASES

DIRECTIONS:

- Section 6 contains completed dental health questionnaires for Patients A–E.
- In a clinical setting, you will gather additional information about your patient with each assessment procedure that you perform. When determining treatment considerations and modifications for Patients A–E, you should take into account the health history and over-the-counter/prescription drug information that was revealed for each patient in Module 4, Medical History.
- Review the completed dental health questionnaires for Patients A–E. For each patient make a list of any concerns, problems, or treatment modifications that will be necessary based on the information on the dental health history.

Dental Health Questionnaire

Patient ALAN A. ASCARI Date 1/15/XX
 Student TYNE BRUCHEIM

REASON FOR TODAY'S VISIT - CHIEF COMPLAINT

What is the main reason for your visit today? CHECK UP - BAD TASTE IN MY MOUTH AND GUMS BLEED
 How did you hear about our practice? NEIGHBOR, I JUST MOVED INTO AREA
 Referred by: _____

PREVIOUS DENTAL TREATMENT

Have you seen another dentist within the last year? NO Name of previous dentist? DR. STEWART TRENTON, NEW JERSEY
 When was your last dental visit? 5 YEARS AGO Have you had x-rays of your teeth taken ☐ Yes ☒ No recently?
 Reason for the above visit? GUMS BLEED

TELL US ABOUT YOUR PREVIOUS DENTAL EXPERIENCES

Have your previous dental visits been favorable/comfortable emotionally? ☒ Yes ☐ No Have you ever had any allergic reactions associated with dental treatment? ☒ Yes ☐ No
 If no, please explain: _____ If yes, please explain: DR. GLOVES MADE MY LIPS SWELL UP
 In general, do you feel positive about your previous dental treatment? ☒ Yes ☐ No Have you ever had difficulty with local anesthetic injections? ☒ Yes ☐ No
 If no, please explain: _____ If yes, please explain: FAINTED
 Have you ever had an adverse reaction to dental treatment? ☒ Yes ☐ No Other dental experiences we should know about?
 If yes, please explain: FAINTED DURING SHOT FOR TEETH

TELL US ABOUT ANY DENTAL CONCERNS YOU MAY HAVE

Are you satisfied with your teeth and their appearance? ☒ Yes ☐ No Are you interested in any specific type of dental treatment at this time?
 If no, please explain: _____ ☐ Implants
☐ Cosmetic dentistry
☐ Replacing missing teeth
☐ Dentures
☒ Replacing old fillings
☐ Other _____
 Are you interested in having your teeth a lighter color? ☐ Yes ☒ No
 If yes, please explain: _____
 A lot can be done to prevent dental diseases (teeth and gum disease). Would you like to know more about preventing dental disease for yourself or your family? ☒ Yes ☐ No
 If yes, please explain: _____

Figure 6-14A. Page 1 of the dental health questionnaire for fictitious patient Mr. Ascari. Page 2 of Mr. Ascari's form is on the following page.

Dental Health Questionnaire (cont)

EXISTING DENTAL NEEDS/CONDITIONS

Please indicate with a check if you have had or have any of the following:

- | | |
|--|---|
| ☐ Sensitive teeth
☐ Hot
☒ Cold
☒ Sweet
☐ Pressure
☒ Broken teeth or fillings
☐ Joint pain or popping or clicking of jaw
☐ Gum boils or other infections
☒ Swollen/painful or bleeding gums
☐ Gum recession
☐ Periodontal treatments (gum)
☐ Frequent filling replacement
☐ Discolored teeth
☐ Crooked teeth
☐ Orthodontic treatment (braces)
☐ Injury to the face, jaws, teeth
☐ Root canal therapy | ☐ Removal of teeth
☐ Sores or growths
☒ Dry mouth
☐ Pain upon swallowing
☐ Grinding or clenching teeth
☐ Persistent headaches, ear aches, or muscle pain
☒ Bad breath, or bad taste in mouth
☐ Food catches between teeth when you eat
☐ Loose teeth
☐ Denture or partial denture
☐ Your bite is changing
☐ Problems chewing
☐ Sore jaws upon awakening. How frequently: _____
Do you prefer to breathe through your
☐ nose or ☐ mouth?
☐ Abnormal swallowing habit - tongue thrusting
☐ Biting your lip or cheek frequently |
|--|---|

DAILY SELF-CARE ACTIVITIES

Do you feel your present daily self-care ☒ Yes ☐ No
is effective in cleaning your mouth?

If no, please explain _____

On a daily basis, how many times do you brush your teeth? (please circle)

Brush only 0 1 2 3 4+
 Floss only 0 1 2+
 Brush and floss 0 1 2 3+

☐ Do not routinely brush or floss on a daily basis

What type of toothbrush do you use?

- ☒ Hard
☐ Medium
☐ Soft
☐ Don't know

Do you use any other dental aids on a regular basis?

- ☐ Bridge cleaners
☐ Stimulents
☐ Rubber tip
☐ Proxabrush
☐ Other _____

DIETARY ACTIVITIES

Please circle:

How many caffeinated beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many alcoholic beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many sugar-containing sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "diet" sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "sport/energy" beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many candy bars or energy/power bars do you eat daily?

0 1 2 3 4+ less than 2-3/week

Do you regularly eat hard candies or breath mints?

- ☐ Yes ☒ No ☐ Occasionally

Do you regularly use tobacco products?

- ☒ Yes ☐ No ☐ Occasionally

Do you use recreational/street drugs?

- ☐ Yes ☒ No ☐ Occasionally

Signature of Patient Alan Ascari

Date 1/15/XX

Reviewed by Tyne Bruchheim

Date 1/15/XX

Figure 6-14B. Page 2 of Mr. Ascari's dental health questionnaire.

Children's Dental Health Questionnaire

Patient BETHANY BIDDLE Date 1/10/XX
 Student EUGENIA MILLER Child's age 9

Is this your child's first visit to a dentist? ☐ Yes ☒ No

Date of last visit: 6/1/XX

If this is not your child's first visit, has his/her previous dental experience been: ☒ Positive ☐ Negative

Do you anticipate that your child will be cooperative? ☒ Yes ☐ No

REASON FOR VISIT

What is the main purpose of your visit today?

CHECK UP

Has your child bumped or cracked any front teeth? ☐ Yes ☒ No

If yes, when? _____

Has your child ever complained of headache, pain, popping, or clicking of the jaws? ☐ Yes ☒ No

FLUORIDE EXPOSURE

Is your water supply at home fluoridated?

☒ Yes ☐ No ☐ Don't know

Does your child take any of the following?

☐ Fluoride tablets
☐ Fluoride drops
☐ Fluoride in vitamins

Does your child use fluoridated tooth paste?

☒ Yes ☐ No ☐ Don't know

PREVENTIVE DENTAL HISTORY

How often does your child brush? 2

Is the child's brushing supervised? ☒ Yes ☐ No

Do you feel your child's daily self-care is effective in cleaning the teeth? ☒ Yes ☐ No

If no, please explain _____

On a daily basis, how many times does your child brush? (please circle)

Brush only	0	1	<u>2</u>	3	4+
Floss only	<u>0</u>	1	2+		
Brush and floss	<u>0</u>	1	2	3+	

☐ Does not routinely brush or floss on a daily basis

Figure 6-15A. Page 1 of the dental health questionnaire for fictitious patient Bethany Biddle.

Children's Dental Health Questionnaire (cont)

CHILD'S EXISTING DENTAL NEEDS/CONDITIONS

Please indicate with a check if your child has had or has any of the following:

- | | |
|---|--|
| ☐ Sensitive teeth | ☐ Removal of teeth |
| ☐ Hot | ☐ Sores or growths |
| ☐ Cold | ☐ Dry mouth |
| ☐ Sweet | ☐ Pain upon swallowing |
| ☐ Pressure | ☐ Grinding or clenching their teeth |
| ☐ Broken teeth or fillings | ☐ Persistent headaches, ear aches, or muscle pain |
| ☐ Joint pain or popping or clicking of jaw | ☐ Bad breath, or bad taste in their mouth |
| ☒ Gum boils or other infections | ☐ Food catches between teeth when you eat |
| ☐ Swollen/painful or bleeding gums | ☐ Loose teeth |
| ☐ Frequent filling replacement | ☐ Problems with chewing |
| ☐ Discolored teeth | ☒ Sore jaws upon awakening. How frequently: <u>2X/WEEK</u> |
| ☒ Crooked teeth | Do they prefer to breathe through their: |
| ☐ Orthodontic treatment (braces) | ☐ nose or ☐ mouth? |
| ☐ Injury to the face, jaws, teeth | ☐ Abnormal swallowing habit - tongue thrusting |
| ☐ Root canal therapy | ☐ Biting their lip or cheek frequently |

DIETARY ACTIVITIES

Please circle:

How many caffeinated beverages does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many sugar-containing sodas does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many "diet" sodas does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many "sport/energy" beverages does your child drink daily?

0 1 2 3 4+ less than 2-3/week

How many candy bars or energy/power bars does your child eat daily?

0 1 2 3 4+ less than 2-3/week

HABITS

Does your child have a night-time bottle? ☐ Yes ☒ No

Does your child do any of the following:

☐ Grinding teeth: Still active? ☐ Yes ☒ No

How long _____

☐ Thumb sucking: Still active? ☐ Yes ☒ No

How long _____

☐ Finger habit: Still active? ☐ Yes ☒ No

How long _____

☐ Lip biting: Still active? ☐ Yes ☒ No

How long _____

☐ Cheek biting: Still active? ☐ Yes ☒ No

How long _____

☐ Nail biting: Still active? ☐ Yes ☒ No

How long _____

☐ Biting on foreign objects such as pencils: Still active? ☐ Yes ☒ No

How long _____

Signature of Parent or Legal Guardian

Brenda Biddle

Date

1/10/XX

Reviewed by

Eugenia Miller

Date

1/10/XX

Figure 6-15B. Page 2 of the dental health questionnaire for fictitious patient Bethany Biddle.

Dental Health Questionnaire

Patient CARLOS C. CHAVEZ Date 1/05/XX
 Student JOEL WEINSTEIN

REASON FOR TODAY'S VISIT - CHIEF COMPLAINT

What is the main reason for your visit today? CHECK UP
GUMS BLEED
 How did you hear about our practice? A FRIEND REFERRED ME
 Referred by: HECTOR GARCIA

PREVIOUS DENTAL TREATMENT

Have you seen another dentist within the last year? NO Name of previous dentist? DR. MALDONALDO MERCEDES, TX
 When was your last dental visit? 2 YEARS AGO Have you had x-rays of your teeth taken recently? ☐ Yes ☒ No
 Reason for the above visit? CLEANING

TELL US ABOUT YOUR PREVIOUS DENTAL EXPERIENCES

Have your previous dental visits been favorable/comfortable emotionally? ☒ Yes ☐ No
 If no, please explain: _____
 Have you ever had any allergic reactions associated with dental treatment? ☐ Yes ☒ No
 If yes, please explain: _____
 In general, do you feel positive about your previous dental treatment? ☒ Yes ☐ No
 If no, please explain: _____
 Have you ever had difficulty with local anesthetic injections? ☐ Yes ☒ No
 If yes, please explain: _____
 Have you ever had an adverse reaction to dental treatment? ☐ Yes ☒ No
 If yes, please explain: _____
 Other dental experiences we should know about: _____

TELL US ABOUT ANY DENTAL CONCERNS YOU MAY HAVE

Are you satisfied with your teeth and their appearance? ☐ Yes ☒ No
 If no, please explain: BROKEN TEETH, DARK COLOR OF TEETH
 Are you interested in having your teeth a lighter color? ☒ Yes ☐ No
 If yes, please explain: _____
 Are you interested in any specific type of dental treatment at this time?
☐ Implants
☐ Cosmetic dentistry
☒ Replacing missing teeth
☐ Dentures
☒ Replacing old fillings
☐ Other _____
 A lot can be done to prevent dental diseases (teeth and gum disease). Would you like to know more about preventing dental disease for yourself or your family? ☒ Yes ☐ No
 If yes, please explain: SO MY GUMS WON'T BLEED

Figure 6-16A. Page 1 of the dental health questionnaire for fictitious patient Mr. Chavez.

Dental Health Questionnaire (cont)

EXISTING DENTAL NEEDS/CONDITIONS

Please indicate with a check if you have had or have any of the following:

- | | |
|--|--|
| ☐ Sensitive teeth
☐ Hot
☐ Cold
☐ Sweet
☐ Pressure
☒ Broken teeth or fillings
☐ Joint pain or popping or clicking of jaw
☐ Gum boils or other infections
☒ Swollen/painful or bleeding gums
☒ Gum recession
☐ Periodontal treatments (gum)
☐ Frequent filling replacement
☒ Discolored teeth
☐ Crooked teeth
☐ Orthodontic treatment (braces)
☐ Injury to the face, jaws, teeth
☐ Root canal therapy | ☐ Removal of teeth
☐ Sores or growths
☐ Dry mouth
☐ Pain upon swallowing
☐ Grinding or clenching teeth
☐ Persistent headaches, ear aches, or muscle pain
☒ Bad breath, or bad taste in mouth
☐ Food catches between teeth when you eat
☐ Loose teeth
☐ Denture or partial denture
☐ Your bite is changing
☐ Problems chewing
☐ Sore jaws upon awakening. How frequently: _____
Do you prefer to breathe through your
☐ nose or ☐ mouth?
☐ Abnormal swallowing habit - tongue thrusting
☐ Biting your lip or cheek frequently |
|--|--|

DAILY SELF-CARE ACTIVITIES

Do you feel your present daily self-care ☐ Yes ☒ No is effective in cleaning your mouth?

If no, please explain GUMS BLEED

On a daily basis, how many times do you brush your teeth? (please circle)

Brush only 0 1 2 3 4+

Floss only 0 1 2+

Brush and floss 0 1 2 3+

☐ Do not routinely brush or floss on a daily basis

What type of toothbrush do you use?

- ☐ Hard
☐ Medium
☐ Soft
☒ Don't know

Do you use any other dental aids on a regular basis?

- ☐ Bridge cleaners
☐ Stimulents
☐ Rubber tip
☐ Proxabrush
☐ Other _____

DIETARY ACTIVITIES

Please circle:

How many caffeinated beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many alcoholic beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many sugar-containing sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "diet" sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "sport/energy" beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many candy bars or energy/power bars do you eat daily?

0 1 2 3 4+ less than 2-3/week

Do you regularly eat hard candies or breath mints?

- ☐ Yes ☒ No ☐ Occasionally

Do you regularly use tobacco products?

- ☐ Yes ☒ No ☐ Occasionally

Do you use recreational/street drugs?

- ☐ Yes ☒ No ☐ Occasionally

Signature of Patient Carlos Chavez

Date 1/05/XX

Reviewed by Joel Weinstein

Date 1/05/XX

Figure 6-16B. Page 2 of Mr. Chavez's dental health questionnaire.

Dental Health Questionnaire

Patient DONNA D. DOI Date 1/30/XX
 Student THALIA JONES

REASON FOR TODAY'S VISIT - CHIEF COMPLAINT

What is the main reason for your visit today? CHECK UP
BLEEDING GUMS
 How did you hear about our practice? YELLOW PAGES
 Referred by: RECENTLY MOVED TO TOWN

PREVIOUS DENTAL TREATMENT

Have you seen another dentist within the last year? YES Name of previous dentist? DR. GLASSCOE
ALPINE, COLORADO
 When was your last dental visit? 6 MONTHS AGO Have you had x-rays of your teeth taken ☒ Yes ☐ No recently?
 Reason for the above visit? CHECK UP

TELL US ABOUT YOUR PREVIOUS DENTAL EXPERIENCES

Have your previous dental visits been favorable/comfortable emotionally? ☒ Yes ☐ No Have you ever had any allergic reactions associated with dental treatment? ☐ Yes ☒ No
 If no, please explain: _____ If yes, please explain: _____
 In general, do you feel positive about your previous dental treatment? ☒ Yes ☐ No Have you ever had difficulty with local anesthetic injections? ☐ Yes ☒ No
 If no, please explain: _____ If yes, please explain: _____
 Have you ever had an adverse reaction to dental treatment? ☐ Yes ☒ No Other dental experiences we should know about?
 If yes, please explain: _____

TELL US ABOUT ANY DENTAL CONCERNS YOU MAY HAVE

Are you satisfied with your teeth and their appearance? ☐ Yes ☒ No Are you interested in any specific type of dental treatment at this time?
 If no, please explain: _____
☐ Implants
☐ Cosmetic dentistry
☐ Replacing missing teeth
☐ Dentures
☐ Replacing old fillings
☐ Other _____
 Are you interested in having your teeth a lighter color? ☐ Yes ☒ No
 If yes, please explain: _____
 A lot can be done to prevent dental diseases (teeth and gum disease). Would you like to know more about preventing dental disease for yourself or your family? ☒ Yes ☐ No
 If yes, please explain: GUMS BLEED

Figure 6-17A. Page 1 of the dental health questionnaire for fictitious patient Mrs. Doi.

Dental Health Questionnaire (cont)

EXISTING DENTAL NEEDS/CONDITIONS

Please indicate with a check if you have had or have any of the following:

- | | |
|---|---|
| ☐ Sensitive teeth
☐ Hot
☐ Cold
☐ Sweet
☐ Pressure
☐ Broken teeth or fillings
☐ Joint pain or popping or clicking of jaw
☐ Gum boils or other infections
☒ Swollen/painful or bleeding gums
☐ Gum recession
☐ Periodontal treatments (gum)
☐ Frequent filling replacement
☐ Discolored teeth
☐ Crooked teeth
☐ Orthodontic treatment (braces)
☐ Injury to the face, jaws, teeth
☐ Root canal therapy | ☐ Removal of teeth
☐ Sores or growths
☐ Dry mouth
☐ Pain upon swallowing
☐ Grinding or clenching teeth
☐ Persistent headaches, ear aches, or muscle pain
☐ Bad breath, or bad taste in mouth
☐ Food catches between teeth when you eat
☐ Loose teeth
☐ Denture or partial denture
☐ Your bite is changing
☐ Problems chewing
☐ Sore jaws upon awakening. How frequently: _____
Do you prefer to breathe through your
☐ nose or ☐ mouth?
☐ Abnormal swallowing habit - tongue thrusting
☐ Biting your lip or cheek frequently |
|---|---|

DAILY SELF-CARE ACTIVITIES

Do you feel your present daily self-care ☐ Yes ☒ No is effective in cleaning your mouth?

If no, please explain MUST NOT BE, GUMS BLEED

On a daily basis, how many times do you brush your teeth? (please circle)

Brush only	0	1	<u>2</u>	3	4+
Floss only	0	<u>1</u>	2+		
Brush and floss	0	1	2	3+	

☐ Do not routinely brush or floss on a daily basis

What type of toothbrush do you use?

- ☐ Hard
☐ Medium
☒ Soft
☐ Don't know

Do you use any other dental aids on a regular basis?

- ☐ Bridge cleaners
☒ Stimulents
☐ Rubber tip
☐ Proxabrush
☐ Other _____

DIETARY ACTIVITIES

Please circle:

How many caffeinated beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many alcoholic beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many sugar-containing sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "diet" sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "sport/energy" beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many candy bars or energy/power bars do you eat daily?

0 1 2 3 4+ less than 2-3/week

Do you regularly eat hard candies or breath mints?

- ☐ Yes ☒ No ☐ Occasionally

Do you regularly use tobacco products?

- ☐ Yes ☒ No ☐ Occasionally

Do you use recreational/street drugs?

- ☐ Yes ☒ No ☐ Occasionally

Signature of Patient Donna Doi

Date 1/30/XX

Reviewed by Thalia Jones

Date 1/30/XX

Figure 6-17B. Page 2 of Mrs. Doi's dental health questionnaire.

Dental Health Questionnaire

Patient ESTHER E. EADS Date 1/24/XX
 Student PARKER SHEFFIELD

REASON FOR TODAY'S VISIT - CHIEF COMPLAINT

What is the main reason for your visit today? CHECK UP How did you hear about our practice? LONG TIME PATIENT
 Referred by: _____

PREVIOUS DENTAL TREATMENT

Have you seen another dentist within the last year? NO Name of previous dentist? _____
 When was your last dental visit? 2 YEARS AGO Have you had x-rays of your teeth taken recently? ☒ Yes ☐ No
 Reason for the above visit? CHECK UP

TELL US ABOUT YOUR PREVIOUS DENTAL EXPERIENCES

Have your previous dental visits been favorable/comfortable emotionally? ☒ Yes ☐ No Have you ever had any allergic reactions associated with dental treatment? ☐ Yes ☒ No
 If no, please explain: _____ If yes, please explain: _____
 In general, do you feel positive about your previous dental treatment? ☒ Yes ☐ No Have you ever had difficulty with local anesthetic injections? ☐ Yes ☒ No
 If no, please explain: _____ If yes, please explain: _____
 Have you ever had an adverse reaction to dental treatment? ☐ Yes ☒ No Other dental experiences we should know about?
 If yes, please explain: _____

TELL US ABOUT ANY DENTAL CONCERNS YOU MAY HAVE

Are you satisfied with your teeth and their appearance? ☒ Yes ☐ No Are you interested in any specific type of dental treatment at this time?
 If no, please explain: _____ ☐ Implants
☐ Cosmetic dentistry
☐ Replacing missing teeth
☐ Dentures
☐ Replacing old fillings
☐ Other _____
 Are you interested in having your teeth a lighter color? ☐ Yes ☒ No
 If yes, please explain: _____
 A lot can be done to prevent dental diseases (teeth and gum disease). Would you like to know more about preventing dental disease for yourself or your family? ☐ Yes ☒ No
 If yes, please explain: _____

Figure 6-18A. Page 1 of the dental health questionnaire for fictitious patient Ms. Eads.

Dental Health Questionnaire (cont)

EXISTING DENTAL NEEDS/CONDITIONS

Please indicate with a check if you have had or have any of the following:

- | | |
|--|---|
| ☐ Sensitive teeth
☐ Hot
☐ Cold
☐ Sweet
☐ Pressure
☐ Broken teeth or fillings
☐ Joint pain or popping or clicking of jaw
☐ Gum boils or other infections
☐ Swollen/painful or bleeding gums
☐ Gum recession
☐ Periodontal treatments (gum)
☐ Frequent filling replacement
☐ Discolored teeth
☐ Crooked teeth
☐ Orthodontic treatment (braces)
☐ Injury to the face, jaws, teeth
☐ Root canal therapy | ☐ Removal of teeth
☐ Sores or growths
☐ Dry mouth
☐ Pain upon swallowing
☐ Grinding or clenching teeth
☐ Persistent headaches, ear aches, or muscle pain
☐ Bad breath, or bad taste in mouth
☐ Food catches between teeth when you eat
☐ Loose teeth
☐ Denture or partial denture
☐ Your bite is changing
☐ Problems chewing
☐ Sore jaws upon awakening. How frequently: _____
Do you prefer to breathe through your
☐ nose or ☐ mouth?
☐ Abnormal swallowing habit - tongue thrusting
☐ Biting your lip or cheek frequently |
|--|---|

DAILY SELF-CARE ACTIVITIES

Do you feel your present daily self-care ☒ Yes ☐ No
is effective in cleaning your mouth?

If no, please explain _____

On a daily basis, how many times do you brush your teeth? (please circle)

Brush only	0	1	<u>2</u>	3	4+
Floss only	0	<u>1</u>	2+		
Brush and floss	0	1	2	3+	

☐ Do not routinely brush or floss on a daily basis

What type of toothbrush do you use?

- ☐ Hard
☐ Medium
☒ Soft
☐ Don't know

Do you use any other dental aids on a regular basis?

- ☒ Bridge cleaners
☐ Stimulents
☐ Rubber tip
☐ Proxabrush
☐ Other _____

DIETARY ACTIVITIES

Please circle:

How many caffeinated beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many alcoholic beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many sugar-containing sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "diet" sodas do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many "sport/energy" beverages do you drink daily?

0 1 2 3 4+ less than 2-3/week

How many candy bars or energy/power bars do you eat daily?

0 1 2 3 4+ less than 2-3/week

Do you regularly eat hard candies or breath mints?

- ☒ Yes ☐ No ☐ Occasionally

Do you regularly use tobacco products?

- ☐ Yes ☒ No ☐ Occasionally

Do you use recreational/street drugs?

- ☐ Yes ☒ No ☐ Occasionally

Signature of Patient Esther Eads

Date 1/24/XX

Reviewed by Frazer Fairhall

Date 1/24/XX

Figure 6-18B. Page 2 of Ms. Eads' dental health questionnaire.

SECTION 7 QUICK QUESTIONS

1. The dental history provides a record of a patient's previous dental experiences.
A dental health history can be used **instead** of a medical health history questionnaire.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
2. Which of the following information is usually NOT gathered as part of the dental health history?
 - A. List of medications, dosages, and when taken
 - B. History of excessive bleeding after an extraction
 - C. Date of last dental appointment
 - D. Reason for today's dental appointment
3. The dental health history provides an excellent opportunity to inquire if the patient is interested in learning about ways to prevent dental disease. The dental health history provides an excellent opportunity to inquire about the patient's current daily self-care routine.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
4. It is appropriate to use an adult dental questionnaire with a child. Thumb sucking is an example of a habit that might have a negative impact on a child's dental health.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.

SECTION 8 SKILL CHECK

TECHNIQUE SKILL CHECKLIST

DENTAL HEALTH QUESTIONNAIRE

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria	S	E
Reads through every line on the completed dental health questionnaire. Identifies any unanswered questions on the form and follows up to obtain complete information.		
Makes notes about any information that is not clear or difficult to read. Confirms that the patient has signed and dated the form.		
Circles concerns in red pencil. Reads through all handwritten responses and circles concerns in red.		
Formulates a list of follow-up questions to review with the patient.		
Formulates a preliminary opinion regarding any treatment alterations that may be needed based on the information gathered during the dental health history assessment. Discusses possible treatment alterations with the clinical instructor.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total " S "s in each I column.		
Sum of " S "s _____ divided by Total Points Possible (5) equals the Percentage Grade _____		

NOTES



NOTES



MODULE 7

Vital Signs: Temperature

MODULE OVERVIEW

This is the first of three modules covering the assessment of vital signs. The four vital signs are temperature, pulse, respiration, and blood pressure. This module covers the technique for measuring oral temperature. Pulse and respiration are discussed in Module 8. The technique for blood pressure assessment is described in Module 9.

This module covers oral temperature taking, including

- How to use a glass fever thermometer
- How to prepare your patient for the procedure
- Step-by-step peak procedures for taking an oral temperature

Before beginning this module, you should have completed the chapter on vital signs in a dental theory textbook.

MODULE OUTLINE

SECTION 1	Introduction to Vital Signs Assessment	210
	Vital Signs Overview	
	Equipment Selection	
SECTION 2	Peak Procedures	212
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	Procedure 7-2: Shaking Down a Glass Thermometer	
	Procedure 7-3: Assessing Oral Temperature with a Glass Thermometer	
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	Back and Forth—From F to C	
	Body Temperature Ranges	
	Variables that Commonly Affect Body Temperature	
	Impact of Temperature Readings on Dental Treatment	
	Internet Resources for Information Gathering	
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	Through the Eyes of a Student	
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	Technique Skill Checklist: Oral Temperature Procedure	
	Communication Skill Checklist: Role-Play for Temperature	

NOTE TO COURSE INSTRUCTOR: Fictitious Patient Cases A–E for the vital signs modules are located in Module 9—Blood Pressure.

SKILL GOALS

- Define the term *vital signs* and discuss how vital signs reflect changes in a person's health status.
- Discuss the dental health care provider's responsibilities in assessing temperature.
- Discuss the rationale for replacing all mercury-containing glass thermometers with mercury-free alternatives.
- Describe factors that can affect a person's body temperature.
- State the variables that can affect accurate temperature assessment.
- Accurately assess, interpret, and document body temperature.
- Provide information to patients about the temperature assessment procedure and the readings that you obtain.
- Properly use and care for equipment.
- Recognize findings that have implications in planning dental treatment.
- Provide appropriate referral to a physician when findings indicate the need for further evaluation.
- Compare temperature findings in the fictitious patient cases A–E (in Module 9) to the normal temperature range.
- Demonstrate knowledge of temperature assessment by applying concepts from this module to the fictitious patient cases A–E in Module 9, Blood Pressure.

SECTION 1 INTRODUCTION TO VITAL SIGNS ASSESSMENT

VITAL SIGNS OVERVIEW

What Are Vital Signs?

1. **Origin of Terminology.** The word “vital” means “necessary to life.” This is why certain key measurements that provide essential information about a person’s health are referred to as vital signs.
2. **Definition.** **Vital signs** are a person’s temperature, pulse, respiration, and blood pressure.
3. **Fifth Vital Sign.** In addition to these standard vital signs, tobacco use has been suggested as the fifth vital sign since tobacco use is a factor in many medical conditions, as well as periodontal disease.
4. **Homeostasis.** The body tries to maintain a state of balance (**homeostasis**) by making adjustments as necessary to keep the body’s vital signs within the range of normal.
5. **Assessment.** Vital signs can be observed, measured, and monitored to provide critical information about a person’s state of health.
 - **Temperature** is the measurement of the degree of heat in a living body.
 - **Pulse** is the measurement of the heart rate in beats per minute. The pulse is a throbbing caused by the contraction and expansion of an artery as blood passes through it.
 - **Respiration** is the breathing rate of an individual, stated in breaths per minute.
 - **Blood pressure** is the force exerted against the walls of the blood vessels as the blood flows through them.

Why are Vital Signs Important?

- Changes in a vital sign may indicate that something is out of balance in the body and the body is trying to get that balance back.
- Vital signs tell the dental health care provider about changes in a person’s, body such as illness, stress, or internal body damage.
- For patient safety, vital signs should be measured before any dental treatment.

Box 7-1. How Are Vital Signs Measured?

- Oral temperature is measured in the mouth, with a thermometer placed under the tongue. A glass, digital, or disposable thermometer may be used.
- Pulse rate is measured by touch. In the dental setting, the pulse rate is felt at the wrist.
- Breathing rate is measured by watching the rise and fall of the chest wall.
- Blood pressure is measured using a stethoscope and a blood pressure cuff. Digital blood pressure cuffs are an alternative to the traditional stethoscope and blood pressure; digital measurement may not be as accurate as the traditional method of assessment.

EQUIPMENT SELECTION

Phase Out of Mercury-Containing Thermometers

Glass thermometers provide an inexpensive means for obtaining an accurate oral temperature. In the past, most glass fever thermometers were filled with mercury. Although mercury thermometers are not harmful when used properly, they pose a health threat when broken or disposed of as trash. [1,2]

1. Mercury from a single broken thermometer that is not properly cleaned up can pose a health threat. Liquid mercury from a broken thermometer can vaporize at room temperature releasing toxic vapors that are readily absorbed into the bloodstream from the lungs.
2. A variety of mercury-free alternatives are available from health supply vendors and local pharmacies.
 - Alternatives comparable in cost and use are **galinstan** glass thermometers or **alcohol-filled** glass thermometers.
 - The most common alternative is the liquid-in-glass thermometer that contains silver-colored galinstan fluid.
3. Mercury fever thermometers should be replaced with the newer mercury-free thermometers. It is important to dispose of the old mercury thermometers and other mercury-containing equipment safely. Take all mercury-containing equipment to a hazardous waste collection facility or contact your local health department for instructions on proper disposal.

TABLE 7-1. Comparison of Liquid-in-Glass Thermometers

Type	Advantages	Disadvantages
Mercury filled	Low cost	Mercury poses a health threat
Galinstan filled	Low cost	No known or anticipated risk
Alcohol filled	Low cost	No known or anticipated risk

Automatic Temperature Equipment

Automatic temperature equipment—also called digital temperature equipment—ranges from the highly calibrated types used in hospital settings to less advanced equipment designed for home use.

1. **Battery-Powered Devices.** The most common types of automatic temperature equipment found in the dental setting are battery-powered devices.
2. **Precautions for Use.**
 - All automatic equipment should be verified using a traditional fluid-filled thermometer.
 - An abnormally high or low temperature reading obtained with an automatic device should be verified by retaking the temperature in a few minutes using a traditional fluid-filled thermometer.

SECTION 2 PEAK PROCEDURES

TEMPERATURE ASSESSMENT WITH A GLASS THERMOMETER

The most common method of taking an oral temperature is with a [glass thermometer](#). Reading a glass thermometer accurately requires training, so it is helpful to practice the technique before attempting temperature assessment on a patient.

Procedure 7-1. Reading a Glass Thermometer

ACTION

1. Hold the stem—the end of the thermometer opposite the bulb—firmly between the thumb and index finger.
2. Hold the thermometer horizontally at eye level with the degree lines visible. Roll the thermometer slowly back and forth between the fingers until the liquid column is visible.
3. The point where the liquid column ends marks the temperature.
 - The division between the long lines is 1° Fahrenheit (F) or Centigrade (C).
 - Each small line in between the long lines equals 0.2°F or C.

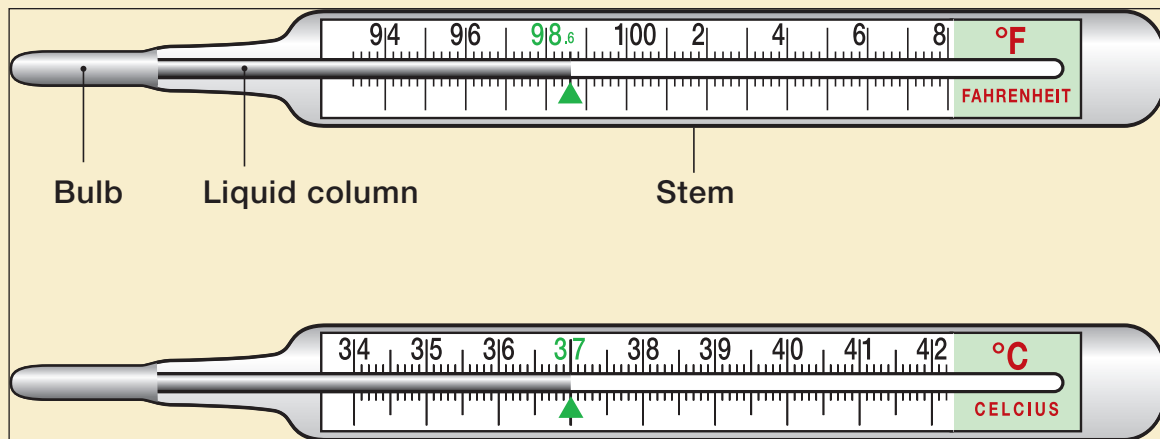


Figure 7-1. Note the location of the liquid column on the scale. The top thermometer pictured has a Fahrenheit scale. The lower thermometer pictured has a Centigrade scale.

SHAKING DOWN THE LIQUID COLUMN PRIOR TO TAKING A READING

Liquid-in-glass thermometers can be used to measure body temperature because the liquid inside the thermometer expands when exposed to the warmth of the oral cavity. The liquid column should be at a level below 94°F (34.4°C) for the temperature assessment procedure. Shaking down the liquid column requires a rapid snapping motion with the wrist, so practicing this technique is helpful.

Procedure 7-2. Shaking Down a Glass Thermometer

ACTION	RATIONALE
1. Grasp the stem—the end of the thermometer opposite the bulb—firmly between the thumb and index finger.	Grasping the bulb may warm the liquid and cause it to rise in the thermometer.
2. Shake the thermometer several times using a quick downward snap of the wrist. Glass thermometers break easily, so shake the thermometer away from counters or objects.	Moves liquid back into the bulb below the previous measurement.
3. Shake the thermometer until the liquid level is below 94°F or 34.4°C.	If not shaken down, the liquid level could result in an inaccurate temperature reading. For example the liquid level is at 100°F, however, the patient's temperature is 98°F. Forgetting to shake down the liquid level results in an incorrect temperature finding of 100°F.

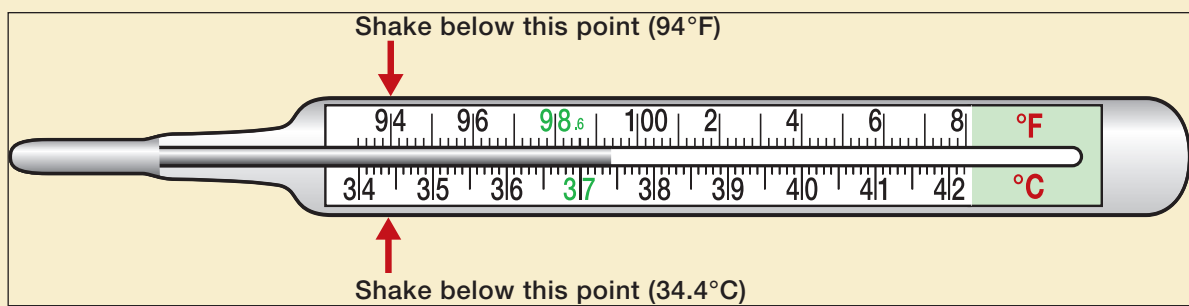


Figure 7-2. Shake down the thermometer. Shake the level of the liquid column below 94°F or 34.4°C.

PROCEDURE FOR TEMPERATURE TAKING

Procedure 7-3. Assessing Oral Temperature with a Glass Thermometer

EQUIPMENT

Mercury-free glass fever thermometer, stored at room temperature
Tissue
Disposable thermometer sheath
Clock or watch with a second hand
Pen (or computer keyboard)

ACTION

RATIONALE

- | | |
|---|--|
| 1. Confirm that the patient has not had alcohol, tobacco, caffeine, or performed vigorous exercise within 30 minutes of the vital signs assessment. | <ul style="list-style-type: none">• The temperature of the oral mucosa affects the accuracy of the thermometer reading.• Alcohol, caffeine, or vigorous exercise can alter pulse and respiration; these vital signs usually are assessed in conjunction with temperature. |
| 2. Wash hands. | <ul style="list-style-type: none">• Reduces likelihood of transmitting microorganisms. |
| 3. Explain the procedure to the patient. | <ul style="list-style-type: none">• Informs the patient of the clinician's intent.• Reduces patient apprehension and encourages patient cooperation. |



Figure 7-3. Explain the procedure to the patient. An important step in the temperature taking procedure is informing the patient of your intent.

(continued)

Procedure 7-3. Assessing Oral Temperature with a Glass Thermometer (continued)

ACTION	RATIONALE
4. Shake the liquid level below 94°F (34.4°C).	• If not shaken down, the liquid level could result in an inaccurate temperature reading.
5. Place a disposable sheath on the thermometer.	• Reduces likelihood of cross-contamination.

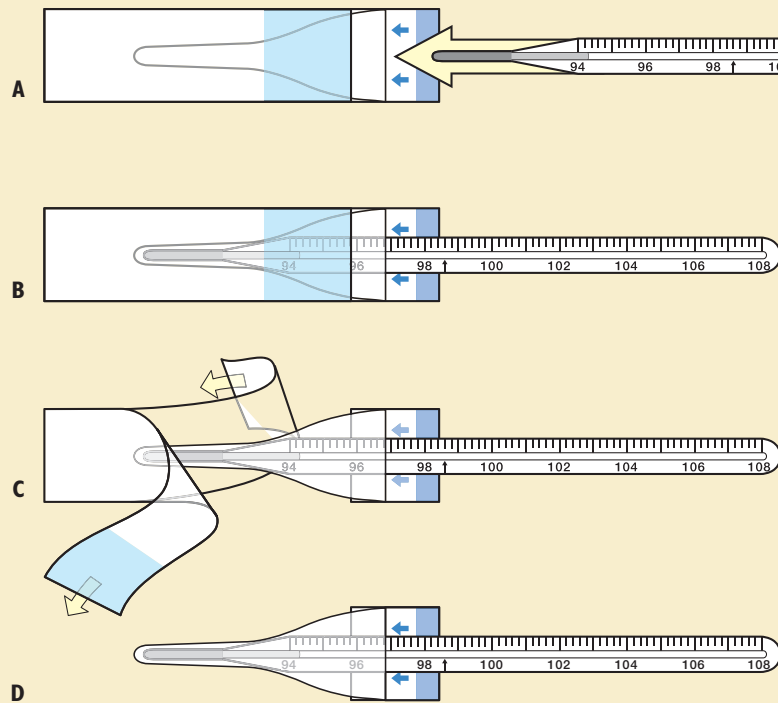


Figure 7-4. Cover thermometer with a sheath. (A) Gently insert the thermometer into the sheath with the bulb toward the closed end of the sheath. (B) Tear paper covering at the dotted line. (C) Hold the small paper section; pull on the larger section to remove it. (D) The thermometer is now ready to for use.

- | | |
|--|---|
| <p>6. Place the thermometer bulb under the patient's tongue—on the right or left side—toward the back of the mouth.</p> <ul style="list-style-type: none"> • Ask the patient to hold the thermometer in place. • The patient should breathe through the nose, keeping the mouth closed. • Caution the patient against biting down on the thermometer. | <ul style="list-style-type: none"> • The heat from the lingual arteries under the tongue causes the liquid column to rise. Positioning the bulb in this manner places it in close contact with blood vessels lying near to the surface. • Closing the lips helps to keep the bulb in position. • Glass thermometers are easily broken. |
|--|---|

(continued)

Procedure 7-3. Assessing Oral Temperature with a Glass Thermometer (continued)

Figure 7-5. Position the bulb under the tongue. Place the bulb to one side toward the back of the mouth.

ACTION**RATIONALE**

- | | |
|--|--|
| 7. Leave the thermometer in place for 3 to 5 minutes, according to clinic protocol. | <ul style="list-style-type: none"> Three full minutes is the minimum amount of time required to obtain an accurate oral temperature using a standard glass thermometer. |
| 8. Take the thermometer from the patient's mouth. Remove the thermometer sheath and discard it in a receptacle for contaminated items. | <ul style="list-style-type: none"> The liquid column is harder to see with the sheath in place. |
| 9. Read the temperature to the nearest tenth. | <ul style="list-style-type: none"> The liquid column may be between the calibration lines. |



Figure 7-6. Read the temperature. Hold the thermometer in a horizontal orientation and turn it slightly until the liquid column is visible. Note the location of the liquid column on the scale.

(continued)

Procedure 7-3. Assessing Oral Temperature with a Glass Thermometer (continued)

ACTION	RATIONALE
10. After reading, place the thermometer on a barrier in a safe location. Wash and dry your hands. Record today's date and time, and the temperature reading in the chart or computer record. Discuss findings with the patient.	• Deters transmission of microorganisms to the paper chart or computer keyboard. • Noting the reading promptly facilitates accurate documentation.
11. Upon completion of the vital signs assessment, report all abnormal findings to a clinical instructor.	• If the temperature reading is elevated, elective dental treatment should be postponed and the patient referred to a primary care physician for evaluation.
12. Wash the thermometer in lukewarm soapy water. Rinse in cold water and dry. Disinfect the thermometer, dry, and place in a storage container.	• Thermometer sheaths can easily tear allowing oral microorganisms to contaminate the thermometer. • Hot water can cause the liquid column to expand, potentially breaking the thermometer. • Proper containers prevent contamination and protect the delicate thermometer.

SECTION 3 READY REFERENCES

NOTE: The Ready References in this book may be removed from the book by tearing along the perforated lines on each page. Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

Ready Reference 7-1. Back and Forth—From F to C

FAHRENHEIT	CENTIGRADE	
94.0	34.4	• To convert Fahrenheit to Centigrade: subtract 32 from the Fahrenheit temperature and divide by 1.8 • To convert Centigrade to Fahrenheit: Multiply the Centigrade temperature by 1.8 and add 32
95.0	35.0	
95.8	35.4	
96.0	35.5	
98.6	37.0	
99.6	37.5	Key: Blue shading indicates a below normal temperature reading. Green shading indicates a normal temperature reading. Red shading indicates an elevated temperature reading.
99.8	36.6	
100.4	38.0	
102.2	39.0	
105.8	41.0	

Ready Reference 7-2. Body Temperature Ranges

Normal body temperature

- The normal adult oral temperature ranges from 96° to 99.6°F (35.5° to 37.5°C).
- The average normal oral temperature is 98.6°F (37°C), however, “normal” varies from person to person.

Elevation in body temperature

- Fever (pyrexia) is a reading over 99.5°F or 37.5°C

Ready Reference 7-3. Variables that Commonly Affect Temperature

- Time of Day—temperature varies throughout the day, usually being lowest in the early morning and rising by 0.5° to 1.0°F (0.3° to 0.6°C) in the early evening
- Exercise—temperature may rise by 1°F (0.6°C) or more after strenuous physical exertion on a hot day
- Age—the average normal oral temperature for persons over 70 years of age is 96.8°F (36.0°C)
- Environment—a cold or hot environment can alter temperature
- Stress—a stressful situation can cause body temperature to rise
- Hormones—a woman's body temperature typically varies by 1°F (0.6°C) or more throughout her menstrual cycle
- Hot Liquids—increase oral temperature for approximately 15 minutes [3]
- Cold Liquids—decrease oral temperature for approximately 15 minutes [3]
- Smoking—increases oral temperature for approximately 30 minutes [3]
- Tachypnea (rapid breathing)—decreases oral temperature [4]
- Infection or Inflammation—increases body temperature

Ready Reference 7-4. Impact of Temperature Readings on Dental Treatment

1. An elevated temperature reading should be reassessed to determine if the initial reading is accurate. Before taking a second temperature reading, reconfirm that the patient has not smoked or consumed a hot beverage for at least 20 minutes. An elevated temperature could also result from spending time in a hot environment, such as driving for an hour in a vehicle with no air conditioning on a hot day.
2. Temperatures in excess of 101°F (38.3°C) usually indicate the presence of an active disease process.
3. In most cases, dental treatment is contraindicated for a patient with an elevated temperature. The patient should be referred to his or her primary care physician for evaluation.
4. If an elevated temperature is due to a dental infection, immediate dental treatment and antibiotic therapy may be indicated.
5. If the temperature is 104°F (40°C) or higher, a consultation with the patient's primary care physician is indicated.
6. A temperature of 105.8°F (41°C) constitutes a medical emergency. Contact emergency medical services (EMS) to request transport to the hospital.

Ready Reference 7-5. Internet Resources for Information Gathering**ASSESSING BODY TEMPERATURE**

<http://www.webmd.com>

The **WebMD** website has information on body temperature, Fahrenheit and Centigrade thermometers, what causes a fever, how to take an oral temperature, how low body temperature can be dangerous, and causes of inaccurate temperature readings.

<http://www.akronchildrens.org>

The website of the **Akron Children's Hospital** has an information sheet titled *Tips to Grow By* that offers information about taking a child's temperature.

<http://www.medem.com>

The **American Academy of Pediatrics'** website has information for parents on taking a child's temperature. Go to the web page, then enter "temperature" in the Search Medical Library box at the top of the page and click on Go.

http://www.ncemi.org/cgincemi/edtable.pl?TheCommand=Load&NewFile=pediatric_vital_signs&BlankTop=1

Emergency Medicine on the Web has a table of normal ranges for pediatric vital signs.

REPLACING MERCURY THERMOMETERS

<http://www.noharm.org/us>

The **Health Care Without Harm** website has online information about mercury thermometers, including the *Thermometer Fact Sheet* and a downloadable PDF booklet entitled *Mercury Thermometers and Your Family's Health*. Click on mercury in the left hand column.

<http://www.osha.gov/SLTC/etools/hospital/hazards/mercury/mercury.html>

The **U.S. Department of Labor Occupational Safety & Health Administration** website has information about the potential hazards of mercury, health effects of exposure to mercury, and treatment of mercury spills.

<http://www.stanford.edu/dept/EHS>

The **Stanford University** website has an informational sheet called *Replace Your Mercury Thermometers Before They Break*.

MODULE REFERENCES

1. Watson WA, Litovitz TL, Rodgers GC Jr, et al. 2002 annual report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. *Am J Emerg Med* 2003;21:353–421.
2. Goldman LR, Shannon MW. Technical report: Mercury in the environment: implications for pediatricians. *Pediatrics* 2001;108:197–205.
3. Terndrup TE, Allegra JR, Kealy JA. A comparison of oral, rectal, and tympanic membrane-derived temperature changes after ingestion of liquids and smoking. *Am J Emerg Med* 1989;7:150–154.
4. Tandberg D, Sklar D. Effect of tachypnea on the estimation of body temperature by an oral thermometer. *N Engl J Med* 1983;308:945–946.

SECTION 4 THE HUMAN ELEMENT

Box 7-2. Through the Eyes of a Student

As a student, I learned an important lesson about people at Mrs. B's initial appointment. Mrs. B. was 65 years old and when she sat down in my chair she started telling me about her career as a model. She had been a catalog model for a large department store in Toronto for over 40 years. Mrs. B. was dressed meticulously in a three-piece suit. Her shoes were polished and perfectly matched her suit. Her makeup and hair were perfect.

Then I began to ask her questions. When was her last dental visit? What was done at that visit? The patient answered my questions and it became obvious that she had neglected her dental health. I took her vital signs. When she opened her mouth for the thermometer, I saw red swollen gingiva and heavy calculus deposits on her lower anterior teeth.

I talked to my instructor in the supply room where the patient would not be able to hear me. I told my instructor how surprised I was that Mrs. B. was neglecting her dental health when "she looked so PERFECT on the outside." My instructor helped me to understand that I should not make assumptions about a patient's values. And even more important, not to expect a patient to have the same health values that I have. My instructor helped me to see that my next task was to talk to my patient without being judgmental. I needed to learn what her values are at the present time. Of course, most importantly, I learned that I must see each patient as a unique individual with his or her own needs and values.

Anonymous graduate
George Brown College of Applied Arts and Technology
Toronto, Canada

ENGLISH TO SPANISH PHRASE LISTS

USING THE ENGLISH TO SPANISH PHRASE LISTS

According to the Bureau of the Census, more than one half of the foreign-born residents in the United States were born in Latin American. Communication problems can occur when an English-speaking clinician tries to communicate with a patient who is not fluent in English.

- Teaching student clinicians to pronounce and speak Spanish is well beyond the scope of this book and, indeed, of most professional curriculums.
- For those times when a trained medical translator is not available, the modules include English-to-Spanish phrase lists with phrases pertinent to the assessment process.
- To use these phrase lists, the student clinician simply points to a specific phrase in the patient's native language to facilitate communication.

TABLE 7-2. English to Spanish Phrase List for Temperature Assessment

I am going to take your temperature.	Voy a tomar su temperatura
Do you have any questions?	¿Usted tiene alguna pregunta?
Open your mouth, please.	Puede abrir su boca.
Please keep the thermometer in your mouth, under your tongue.	Por favor mantenga el termómetro bajo su lengua.
Please hold the end of the thermometer with your fingers and keep your lips closed.	Por favor aguante el termómetro con sus dedos, y mantenga los labios cerrado.
Be careful not to bite the thermometer.	Tenga cuidado no morder el termómetro.
Please breathe through your nose.	Por favor respire por su nariz y no por la boca.
It will take 3 minutes to measure your temperature.	Se demora tres minutos para medir su temperatura.
Your temperature is normal.	Su temperatura esta normal.
You have a slight fever.	Usted tiene un poco de fiebre.
You have a high fever.	Usted tiene una fiebre alta.
We cannot treat you today because of your fever.	No vamos poder hacer ningún tratamiento dental hoy por la fiebre que usted tiene.
I am concerned about your very high fever; I want to call your doctor. Who is your doctor?	Su fiebre elevada me preocupa, y quiero llamar a su medico. ¿Me puede dar su nombre y numero de teléfono?
I recommend that you consult your family doctor about your fever.	Recomendó que usted consulte con su medico sobre la fiebre que tiene.

SECTION 5 QUICK QUESTIONS

1. The normal adult temperature obtained using an oral thermometer ranges from:
 - A. 96.6°–98.6°F (35.8°–37°C)
 - B. 96°–99.6°F (35.5°–37.5°C)
 - C. 98.6°–100.4°F (37°–38.1°C)
 - D. 98.2°–100.2°F (36.8°–37.9°C)
2. A glass thermometer generally is NOT recommended for use with which of the following patients?
 - A. A 3-year-old child
 - B. A 10-year-old child
 - C. A 32-year-old pregnant woman
 - D. A 70-year-old senior citizen
3. How does a Centigrade glass thermometer differ from a Fahrenheit glass thermometer?
 - A. Centigrade glass thermometers never contain mercury.
 - B. Centigrade glass thermometers are used only in European countries.
 - C. Centigrade glass thermometers are marked with a different temperature scale.
 - D. Centigrade glass thermometers are used only in medical settings, such as hospitals.
4. Health organizations, such as the American Academy of Pediatrics, recommend that mercury thermometers be replaced with mercury-free thermometers because:
 - A. Mercury-free thermometers are less expensive than mercury thermometers.
 - B. The mercury column in a mercury thermometer has a tendency to separate.
 - C. Mercury thermometers break more easily than mercury-free thermometers.
 - D. Mercury presents a health risk.
5. Which of the variables listed below does NOT commonly affect body temperature as measured with an oral thermometer?
 - A. Age
 - B. Chewing gum
 - C. High blood pressure
 - D. Smoking
6. Mrs. Jones has been a patient in the dental office for 15 years. Her temperature today is 95.8°F (35.4°C). Looking back through her chart, you note that her temperature has ranged from 95.8° to 96°F (36.0°–35.5°C) over the years. Would a temperature of 95.8°F (35.4°C) be considered an abnormal temperature for Mrs. Jones?
 - A. Yes, 95.8°F (35.4°C) is an abnormally low temperature.
 - B. Maybe. It depends whether Mrs. Jones has consumed any ice-cold drinks within the past 15 minutes.
 - C. No. Normal varies from person to person.

SECTION 6 SKILL CHECK

TECHNIQUE SKILL CHECKLIST ORAL TEMPERATURE PROCEDURE

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Seats the patient in a comfortable upright position. Confirms that the patient has not had a hot or cold beverage or smoked within the previous 30 minutes.		
Washes hands.		
Shakes down the thermometer so that the liquid level is below 94°F or 34.4°C.		
Covers the thermometer with a disposable sheath.		
Asks the patient to open the mouth. Positions the bulb under the tongue on one side toward the back of the mouth.		
Maintains the thermometer in the patient's mouth for 3 to 5 minutes.		
Removes the thermometer from the patient's mouth. Removes and discards the sheath in an appropriate receptacle.		
Holds the thermometer in a horizontal position. Reads the position of the liquid column to the nearest tenth.		
Places the thermometer on a barrier in a safe location. Washes and dries hands. Records today's date, time, and the oral temperature reading in the patient chart or computer record.		
Upon completion of the vital signs assessment, washes the thermometer in lukewarm soapy water. Rinses it in cold water. Disinfects and dries thermometer; places it in an appropriate container.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (10) equals the Percentage Grade _____		

COMMUNICATION SKILL CHECKLIST

ROLE-PLAY FOR TEMPERATURE

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of the patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains what is to be done.		
Reports the temperature reading to the patient and explains if the reading is normal or outside the normal range and the significance of the finding.		
Encourages patient questions before and after the temperature assessment procedure.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level, avoiding dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct medical and dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (6) equals the Percentage Grade _____		

NOTES

MODULE 8

Vital Signs: Pulse and Respiration

MODULE OVERVIEW

This is the second of three modules covering the assessment of vital signs. Vital signs are key measurements that provide essential information about a person's state of health.

This module describes assessment of pulse and respiratory rates, including:

- The anatomy of the brachial and radial arteries
- Palpating the radial pulse point
- Determining the pulse rate
- Measuring respiratory rate

Before beginning this module, you should have completed the chapter on vital signs in a dental theory textbook.

MODULE OUTLINE

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	Procedure 8-2. Determining Pulse Rate	
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NOTE TO COURSE INSTRUCTOR: Fictitious Patient Cases A–E for the vital signs modules are located in Module 9, Blood Pressure.

SKILL GOALS

- Define the term *pulse* and describe factors that may affect a person's pulse.
- Describe the different qualities of the pulse that a clinician should be aware of when taking a pulse.
- Demonstrate the correct technique for locating and assessing the radial pulse.
- Explain why the patient should not be told beforehand that the clinician is assessing his or her respiratory rate.
- Describe the factors that may affect a person's respirations.
- Explain the terms used to describe a person's respirations.
- Demonstrate the correct technique for assessing respiration.
- Provide information to the patient about the pulse and respiration assessment procedure and the readings that you obtain.
- Recognize findings that have implications in planning dental treatment.
- Provide appropriate referral to a physician when findings indicate the need for further evaluation.
- Compare findings in the fictitious patient cases A–E (Module 9) to the normal ranges for pulse and respiration.
- Demonstrate knowledge of the pulse and respiration assessment by applying concepts from this module to the fictitious patient cases A–E in Module 9, Blood Pressure.

SECTION 1 PEAK PROCEDURES FOR PULSE ASSESSMENT

INTRODUCTION TO PULSE

Pulse Rate

The **pulse rate** is an indication of an individual's heart rate. Pulse rate is measured by counting the number of rhythmic beats that can be felt over an artery in 1 minute. *The normal adult heart rate is between 60 and 100 beats per minute.* Rapid or slow pulse rates are not necessarily abnormal. Athletes tend to have slow pulses at rest. Increased pulse rates may be a normal response to stress, exercise, or pain.

Pulse Points

As the heart beats and forces blood through the body, a throbbing sensation—the **pulse**—can be felt by putting the fingers over one of the arteries that are close to the surface of the skin. **Pulse points** are the sites on the surface of the body where rhythmic beats of an artery can be easily felt. The most commonly used pulse point is over the radial artery in the wrist. Before practicing the techniques for assessing the pulse rate and blood pressure, it is helpful to locate and palpate the brachial and radial pulse points on the underside of the arm.

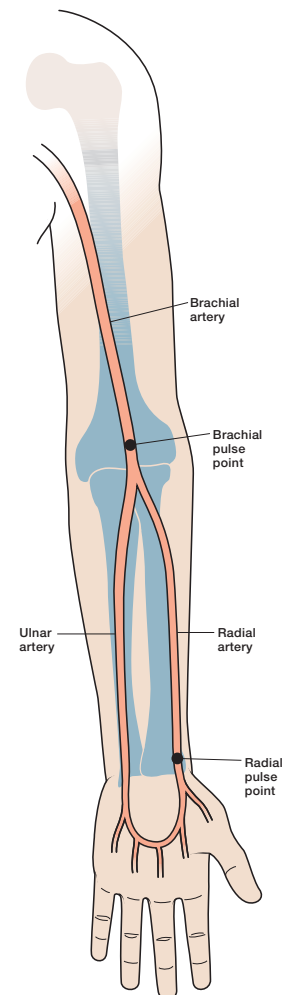


Figure 8-1. The anatomy of the brachial and radial arteries of the arm.

- The **brachial artery** is the main artery of the upper arm; it divides into the radial and ulnar arteries at the elbow. The brachial artery is used when taking blood pressure.
- The **radial artery** is a branch of the brachial artery beginning below the elbow and extending down the forearm on the thumb-side of the wrist and into the hand.

ASSESSING PULSE RATE

Procedure 8-1. Practice Locating the Radial Artery

ACTION

RATIONALE

1. Sit or stand facing the patient. Position the patient's arm a palm up position with his or her arm resting comfortably on a countertop or chair armrest.

- This position makes it easy to locate the radial pulse point.

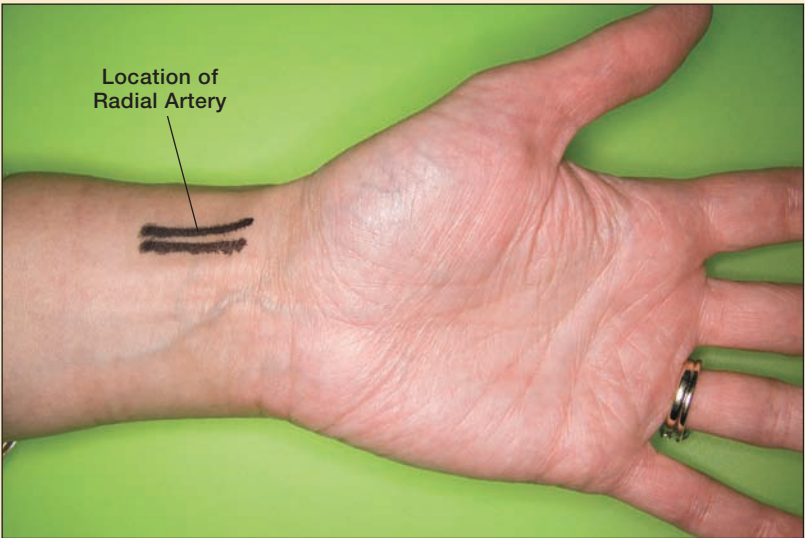


Figure 8-2. Location of the radial artery on the thumb side of the wrist.

2. Place the finger pads of your index, middle, and ring fingers at the base of the thumb on the patient's wrist.

Feel the throbbing pulse by pressing lightly in the shallow groove at the base of the thumb.

- The sensitive finger pads can feel the pulsation of the artery.
- The thumb has a pulse of its own that might be confused with the patient's pulse.
- Too much pressure will make it difficult to detect the pulsations under your fingers.

Procedure 8-2. Determining Pulse Rate**EQUIPMENT**

Clock or watch with second hand or digital readout

ACTION**RATIONALE**

- | | |
|---|--|
| 1. It takes time to obtain an accurate oral temperature using a glass thermometer. For this reason, pulse, respiration, and blood pressure are assessed during the time needed to determine the oral temperature. | <ul style="list-style-type: none"> Assessing the other vital signs while the thermometer registers the patient's temperature makes efficient use of appointment time. |
| 2. Explain the pulse assessment procedure to the patient. | <ul style="list-style-type: none"> Informs the patient of the clinician's intent. Reduces patient apprehension and encourages cooperation. |
| 3. The patient's arm should be resting comfortably on the chair armrest or other support, such as, a countertop. | <ul style="list-style-type: none"> There is no reason for the patient's arm to be in an awkward position. |



Figure 8-3. Arm position. Position the patient's arm in a comfortable position.

- | | |
|---|--|
| 4. Sit or stand facing the patient. Grasp the patient's wrist with the fingers of your free (non-watch-bearing) hand. | <ul style="list-style-type: none"> This position is comfortable for the patient and convenient for the clinician. |
|---|--|

(continued)

Procedure 8-2. Determining Pulse Rate (continued)

ACTION	RATIONALE
5. Using the finger pads of your first three fingers, locate the radial pulse point on the thumb side of the patient's wrist. Apply only enough pressure so that the radial artery can be distinctly felt.	• The thumb is never used to assess the pulse. The thumb has a pulse; this pulse could be confused with the patient's pulse. • Moderate pressure facilitates palpation of the beats. The pulse is imperceptible with too little pressure, whereas, too much pressure obscures the pulse.
	
Figure 8-4. Locate the radial artery. Place the fingers along the radial artery.	
6. Look at a watch or clock and wait until the second hand gets to the "12" or "6." When the second hand reaches the "12" or "6," begin counting the pulse beats. Count for a minimum of 30 seconds. Multiply this number by 2 to calculate the pulse rate for 1 minute. If the pulse is irregular in any way or if your patient has a pacemaker, count the beats for 1 minute.	• Starting with the second hand at the "12" or "6" makes it easy to determine when 30 seconds has passed. • Sufficient time is needed to assess the rate and characteristics of the pulse. • With an irregular pulse, the beats counted in a 30-second period may not represent the overall rate. The longer you measure, the more these variations are averaged out.
7. Make a mental note of the pulse rate and without letting go of the patient's wrist, begin to observe the patient's breathing. Assessment of the respiration should begin immediately after taking the patient's pulse.	• The patient may alter the rate of respirations if aware that breathing is being monitored.

SECTION 2 PEAK PROCEDURES FOR ASSESSING RESPIRATION

INTRODUCTION TO RESPIRATION

Respiratory Rate

Respiration is the process that brings oxygen into the body and removes carbon dioxide. With each normal breath, a person inhales 500 mL of air and exhales the same amount.

- The **respiratory rate** is measured by counting the number of times that a patient's chest rises in 1 minute.
- *The normal adult respiratory rate is between 14 and 20 breaths per minute.*
- Young children use their diaphragms when breathing. For this reason, the respiratory rate of a young child is measured by observing the abdomen rise and fall.
- Observing respiration is necessary to detect signs of interference with the breathing process.
- Excitement, exercise, pain, and fever increase respiratory rate.
- Rapid respiration is characteristic of lung diseases such as emphysema. Heart disease also increases the rate of respiration, as do some drugs.

Control of Respiration

Respiration is mostly unconscious; people breathe without thinking about it. Unlike pulse rate, however, respiration is easily brought under voluntary control. Breath-holding, panting, use of expiratory air to speak, singing, or sighing at will are all examples of this **voluntary control**. Just thinking about respiration causes most individuals to alter their breathing rate. Telling someone to “breathe normally” almost certainly will cause that person to begin to breathe more slowly or rapidly. For this reason, the respiratory rate should be measured immediately after taking a pulse.

Counting the respirations while appearing to count the pulse helps to keep the patient from becoming conscious of his or her breathing and possibly altering the usual rate.

Assessing Respiration

Procedure 8-3. Count Your Own Respiratory Rate

ACTION	RATIONALE
1. Place a hand on your own chest and feel your chest rise. One breath in and out is counted as one respiration.	• One inspiration and expiration comprises one respiration.
2. Count the number of times your chest rises for 30 seconds and multiply by 2 to obtain your respiratory rate.	• Sufficient time is needed to observe the breathing rate and characteristics.
3. Note if your breathing is irregular. Listen for unusual breath sounds. Note how much effort is needed for you to breathe. Normal breathing should be quiet and effortless.	• Abnormal respirations may be irregular, rapid, labored, weak, or noisy.

Procedure 8-4. Assessing the Respiratory Rate

EQUIPMENT

Clock or watch with second hand or digital readout
 Pen (or computer keyboard)

ACTION

RATIONALE

- | | |
|---|---|
| <p>1. This assessment is best done immediately after taking the patient's pulse. Do not announce that you are measuring the respirations.</p> | <ul style="list-style-type: none"> • Respiratory rate is under voluntary control. If the patient knows that you are counting the breaths, he/she may change breathing pattern. |
| <p>2. After determining the pulse rate, keep your fingers resting on the patient's wrist and begin to assess the patient's respiration.</p> <p>Observe respirations inconspicuously; use peripheral vision to observe the chest rise and fall.</p> | <ul style="list-style-type: none"> • The patient will assume that you are still counting the pulse rate. • Breathing rate can be controlled voluntarily. |
| <p>3. Look at a watch or clock and wait until the second hand gets to the "12" or "6". When the second hand reaches the "12" or "6," use your peripheral vision to watch the chest and begin counting each rise of the chest as one breath.</p> <p>Count the number of breaths for a minimum of 30 seconds. In adults with irregular rates, count for 1 full minute.</p> | <ul style="list-style-type: none"> • Sufficient time is needed to observe the breathing rate and characteristics. |



Figure 8-5. Begin assessment of respiration. With your fingers still in place after counting the pulse rate, observe the patient's respirations.

(continued)

Procedure 8-4. Assessing the Respiratory Rate (continued)

ACTION	RATIONALE
4. Pay attention to the depth and rhythm of the patient's respirations by watching the chest rise and fall. • Normal breathing is easy, quiet, and regular. • Abnormal respirations may be irregular, rapid, labored, weak, or noisy. • If breathing is abnormal in any way, count the respirations for at least 1 full minute.	• Increased time allows detection of abnormal characteristics.
5. Record the pulse and respiratory rates in the patient chart or computer record. Discuss the findings with the patient. Upon completion of the vital signs assessment, report all abnormal findings to a clinical instructor.	• Recording findings immediately in the chart facilitates accurate documentation and reporting. • Elective dental treatment may be postponed due to abnormal findings. For example, a patient with labored breathing should be referred to his or her physician for evaluation.

SECTION 3 READY REFERENCES

NOTE: The Ready References in this book may be removed from the book by tearing along the perforated lines on each page. Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

Ready Reference 8-1. Normal Pulse Rates per Minute at Various Ages

AGE	APPROXIMATE RANGE	APPROXIMATE AVERAGE
2–6 years	75–120	100
6–12 years	75–110	95
Adolescence to adult	60–100	80

Ready Reference 8-2. Normal Respiratory Rates per Minute at Various Ages

AGE	APPROXIMATE RANGE
Preschooler (3–6 years)	22–34
School-age (6–12 years)	18–30
Adolescent (12–18 years)	12–16
Adult	14–20

Ready Reference 8-3. Factors Affecting Pulse and Respiration

FACTORS AFFECTING PULSE	FACTORS AFFECTING RESPIRATION
✓ Age	✓ Age
✓ Medications	✓ Medications
✓ Stress	✓ Stress
✓ Exercise	✓ Exercise
	✓ Altitude
	✓ Gender
	✓ Body position
	✓ Fever

Ready Reference 8-4. Pulse Patterns

Regular—evenly spaced beats; may vary slightly with respiration

Regularly irregular—regular pattern overall with “skipped” beats

Irregularly irregular—no real pattern, difficult to measure accurately

Normal amplitude—full, strong pulse that is easily felt

Abnormal amplitude—weak pulse that is not easily felt

Ready Reference 8-5. The Leaps and Bounds of Pulse Assessment

To assess the amplitude of a pulse, use a numerical scale to characterize the strength.

0—absent pulse, not palpable

+1—weak or thready pulse, hard to feel; the beat easily eliminated by slight finger pressure

+2—normal pulse, easily felt; the beat is eliminated by forceful finger pressure

+3—bounding, forceful pulse that is readily felt; the beat not easily eliminated by pressure from the fingers

Ready Reference 8-6. Evaluation of Respiration

Rhythm—regularity of respirations

Ease—easy, labored, or painful?

Depth—deep or shallow?

Noise—slight, wheezing, gurgling?

Abnormal odor—fruity odor, alcohol on breath?

Ready Reference 8-7. Pulse Pressure

Normal

The pulse pressure is smooth



Weak

The pulse pressure is diminished; the pulse feels weak and small



Bounding

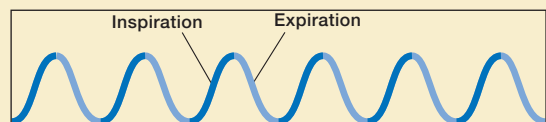
The pulse pressure is increased and the pulse feels strong and bouncing



Ready Reference 8-8. Types of Respiration

Normal

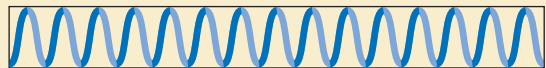
The respiratory rate is about 14–20 per minute in adults



Rapid Shallow Breathing

(Tachypnea)

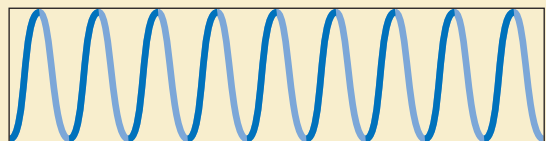
The respiratory rate is greater than 20 per minute; causes include restrictive lung disease and inflammation of the lungs



Rapid Deep Breathing

(Hyperpnea, Hyperventilation)

Breathing with increased rate and depth; causes include exercise, anxiety, and metabolic acidosis



Slow Breathing

(Bradypnea)

Breathing with decreased rate and depth; one common cause is diabetic coma



Obstructive Breathing

The expiration is prolonged because of narrowed airways; causes include asthma, chronic bronchitis, and chronic obstructive pulmonary disease (COPD);



Ready Reference 8-9. Internet Resources: Pulse and Respiration

PULSE

<http://www.bartleby.com/107/>

Bartleby Great Books Online website has *Gray's Anatomy* available for online searches. Enter the anatomic structure that you would like to view in the Search box and click on the Go button. Suggested searches: radial artery, brachial artery, and lungs.

<http://www.time-to-run.com/beginners/pulse.htm>

The **Time-To-Run** website has instructions on how to take and record your pulse as part of an exercise regimen (running).

http://my.webmd.com/hw/heart_disease/hw233473.asp

This **Web MD Health** website has an excellent explanation of pulse measurement.

<http://www.americanheart.org/presenter.jhtml?identifier54701>

A direct link to information on the resting heart rate from the **American Heart Association**.

<http://www.americanheart.org/presenter.jhtml?identifier53003308>

A direct link to information on how cigarette smoking affects the heart from the **American Heart Association**.

RESPIRATION

<http://www.lungusa.org>

The website of the **American Lung Association** has a wealth of information on respiratory diseases and smoking cessation programs. For information about the respiratory system, enter this website link <http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=22551> and then click on the box marked YOUR LUNGS at the top of the page. A drop down menu will open with links to information about the respiratory system.

<http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookRESPSYS.html>

Detailed explanation of the respiratory system and gas exchange on the **Maricopa County Community College District** website.

<http://www.leeds.ac.uk/chb/lectures/anatomy7.html>

An introduction to respiratory anatomy from the **Centre for Human Anatomy** of Leeds University in England.

<http://www.instantanatomy.net/thorax/areas/respiratorysystem.html>

The **Instant Anatomy** website maintained by Robert Whitaker, Cambridge University, United Kingdom.

SECTION 4 THE HUMAN ELEMENT

Box 8-1. Through the Eyes of a Student

It was my first appointment with Mr. J. As I prepared for his appointment I noted that he is 70 years old and has a history of congestive heart failure. When I assessed Mr. J's respiration, he seemed breathless and to be having some difficulty in breathing. He seemed to be tired even though this was a morning appointment. I reclined the dental chair so that he could rest while I took his blood pressure. Once he was in a supine position, Mr. J. seemed to have even more difficulty breathing and he asked to sit upright again.

I wanted to get on with the appointment because I was worried about completing all my clinic requirements. Something in the back of my mind, however, kept telling me that I should be concerned about Mr. J's labored breathing. I decided to report my observations to my clinic instructor.

My instructor called an ambulance and the paramedics transported Mr. J. to the hospital. Later I received a telephone call from Mrs. J. telling me that her husband was hospitalized and saying that my actions might have saved his life. I learned that day that even seemingly small things like a patient's respiratory rate could be significant. Now, I take the vital signs assessment procedures more seriously and never rush through them.

George, student,
Tallahassee Community College

TABLE 8-1. English to Spanish Phrase List for Pulse and Respiration Assessment

I am going to take your pulse.	Voy a tomar su pulso.
Do you have any questions?	¿Tiene alguna pregunta?
Just relax; this will only take a few minutes.	Cálmese; esto se demora unos minutos.
Please breathe through your nose and not through your mouth.	Por favor respire por su nariz, y no por su boca.
Your pulse rate is normal.	Su pulso es normal.
Your pulse rate is a little fast.	Su pulso es un poco rápido.
Do you know what your pulse rate normally is?	¿Usted sabe cual es su pulso normal?
I am concerned about your rapid pulse. I want to call your doctor. Who is your doctor?	Estoy preocupada por su rápido pulso, y quiero llamar a su doctor. ¿Quién es su doctor?
Your respiratory rate is normal.	La respiración es normal.
Your pulse and respiration are normal.	Su pulso y respiración están normal.
It seems to be difficult for you to breathe.	Parece que usted tiene un poco de dificultad
Is your breathing normally like this?	respirando. ¿Esto es normal para usted?
Are you nervous about the dental treatment today?	¿Está nervioso / nerviosa sobre su tratamiento dental hoy?
I am concerned about your breathing. I want to call your doctor. Who is your doctor?	Estoy preocupado sobre su ritmo de respiración, y quiero llamar a su doctor. ¿Quién es su doctor?

NOTE: The [Practical Focus—Patient Cases Section](#) for all of the vital signs modules is located in Module 9, Blood Pressure.

SECTION 5 QUICK QUESTIONS

1. The pulse rate is an indication of a person's:
 - A. Heart rate
 - B. Blood pressure
 - C. Respiration
 - D. Cholesterol
2. The main artery of the upper arm is the:
 - A. Radial artery
 - B. Ulnar artery
 - C. Carotid artery
 - D. Brachial artery
3. The radial pulse point is located:
 - A. On the wrist, below the little finger
 - B. On the thumb side of the wrist
 - C. Near the center of the wrist
 - D. At the bend in the arm opposite the elbow
4. The normal pulse rate for an adult ranges from:
 - A. 60–100 beats per minute
 - B. 75–120 beats per minute
 - C. 75–110 beats per minute
 - D. 80–120 beats per minute
5. The respiratory rate of an adult patient is measured by:
 - A. Observing the patient's nose
 - B. Observing the rising and falling of the chest
 - C. Observing the rising and falling of the abdomen
 - D. Counting an inspiration and expiration as two respirations
6. The normal respiratory rate for an adult is:
 - A. 22–34 respirations per minute
 - B. 18–30 respirations per minute
 - C. 12–16 respirations per minute
 - D. 14–20 respirations per minute

SECTION 6 SKILL CHECK

TECHNIQUE SKILL CHECKLIST

PULSE AND RESPIRATION

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Positions the patient with the arm resting comfortably on the armrest or other support.		
Faces the patient. Grasps the patient's wrist with the fingers of the free (non-watch-bearing) hand.		
Using the finger pads, locates the radial pulse point on the thumb side of the patient's wrist. Applies only enough pressure so that the radial artery can be distinctly felt.		
Notes whether the pulse is regular or irregular.		
Using a watch with a second hand, counts the beats for a minimum of 30 seconds if the pulse is regular. Counts the pulse for 1 minute if the pulse is irregular. Calculates the pulse rate.		
Makes a mental note of the pulse rate and without letting go of the patient's wrist, begins to observe the patient's breathing. Does not inform the patient that the respirations are being assessed.		
When one complete cycle of inspiration and expiration has been observed, looks at watch in preparation for determining the respiratory rate. Counts the number of breaths for a minimum of 30 seconds. If breathing is abnormal in any way, counts the respirations for 1 minute. Calculates the respiratory rate.		
Records today's date, time, and the pulse and respiratory rates in the patient chart or computer record.		
Reports pulse rate within 2 beats of the evaluator's rate.		
Reports respiratory rate within 2 breaths of the evaluator's rate.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (10) equals the Percentage Grade _____		

COMMUNICATION SKILL CHECKLIST

ROLE-PLAY FOR PULSE AND RESPIRATION

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of the patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains what is to be done at the start of the pulse assessment procedure.		
At the conclusion of the pulse assessment, does not announce that respiration will be assessed next.		
Upon completion of the procedures, reports the pulse and respiration findings to the patient and explains if the readings are normal or outside the normal range and the significance of these findings.		
Encourages patient questions before and after the assessment procedure.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level and avoids dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct medical and dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (7) equals the Percentage Grade _____		

NOTES

MODULE 9

Vital Signs: Blood Pressure

MODULE OVERVIEW

This is the third of three modules on vital signs assessment. Vital signs are a person's temperature, pulse, respiration, and blood pressure. In addition to these standard vital signs, tobacco use has been suggested as the fifth vital sign. Tobacco use—smoking cigarettes, cigars, or pipes—is a contributing factor in many medical conditions and, in addition, increases the risk of periodontal disease.

This module describes measurement of blood pressure, including:

- Equipment for blood pressure determination
- Sounds heard during blood pressure measurement
- Critical technique elements
- Peak procedures for blood pressure assessment

Before beginning this module, you should have completed the chapter on vital signs in a dental theory textbook.

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SKILL GOALS

- Define the term *blood pressure* and describe factors that may affect a person's blood pressure.
- Explain how a sphygmomanometer works, and demonstrate how to use this tool to measure blood pressure.
- Diagram the parts of the stethoscope and explain how this tool is used.
- Given a selection of blood pressure cuffs, identify the five basic cuff sizes.
- Identify the bladder width and length of a cuff.
- Check to see if the length, width, and center of the bladder are correctly marked; if not, correctly mark the cuff.
- List and describe the Korotkoff sounds that are heard while taking a person's blood pressure.
- Define and discuss the significance of the auscultatory gap.
- Correctly position the patient for blood pressure assessment.
- Locate and palpate the brachial pulse point in the antecubital fossa.
- Demonstrate correct technique for accurately assessing the blood pressure.
- Provide information to the patient about the blood pressure assessment procedure and the readings that you obtain.

- Recognize findings that have implications in planning dental treatment.
- Provide appropriate referral to a physician when findings indicate the need for further evaluation.
- Compare findings for the fictitious patient cases A–E to the normal range for blood pressure.
- Demonstrate knowledge of blood pressure assessment by applying concepts from this module to the fictitious patient cases A–E found in Section 6.

SECTION 1 INTRODUCTION TO BLOOD PRESSURE

BLOOD PRESSURE ASSESSMENT IN THE DENTAL SETTING

The National Heart, Lung, and Blood Institute (NHLBI) estimates that 65 million Americans have high blood pressure. Of those 65 million, nearly 20 million are not aware they have the condition. As the population ages, the prevalence of hypertension will increase even further unless broad based measures are implemented for blood pressure screening. Dental health care providers can play an important role in improving the current levels of detection for hypertension (Box 9-1).

Box 9-1. Standard of Care for Blood Pressure Assessment

- The American Dental Association (ADA) recommends that blood pressure assessment should be a routine part of the initial appointment for all new dental patients—including children—as a screening tool for undiagnosed high blood pressure.
- In addition, the ADA suggests that a blood pressure assessment should be routinely performed at continuing care appointments (3-, 4-, 6-, or 12-month recall appointments).

Blood Pressure Overview

Arterial **blood pressure** is the pressure exerted against the blood vessel walls as blood flows through them. Every time the heart contracts, it forces 6 quarts of blood beyond the torso and out to the head, hands, and feet. With each contraction, the blood not only pushes through the vessels, but also presses outward against the vessel walls.

- The highest pressure occurs when blood is propelled through the arteries by the contraction of the heart. The pressure created by the blood as it presses thorough and against the vessel walls is known as the **systolic pressure**.
- When the heart relaxes between beats, the pressure exerted on the vessels lessens, but only to a point. That lower pressure is known as the **diastolic pressure**.
- Blood pressure is one clue to the health of the heart and blood vessels; therefore, its measurement is an important part of the patient assessment.
- While both pressures are clinically significant, the latest evidence from research indicates the systolic blood pressure to be the more important of the two in the management of high blood pressure. [1]

Hypertension and Hypotension

1. Blood pressure measurements indicate if a person is **hypertensive** (has abnormally high blood pressure) or **hypotensive** (has abnormally low blood pressure).
2. High blood pressure—**hypertension**—is blood pressure that stays at or above 140/90.
3. Blood pressure increases when larger blood vessels begin to lose their elasticity and the smaller vessels start to constrict, causing the heart to try to pump the same volume of blood through vessels with a smaller internal diameter.

Symptoms, Diagnosis, Treatment, and Compliance

- Hypertension usually has no symptoms (is **asymptomatic**). For this reason, high blood pressure is often called the “**silent killer**.”
- The only way for an individual to know if he or she has hypertension is to have a blood pressure screening.
- Hypertension is easy and painless to detect in a few minutes using a blood pressure cuff and stethoscope.
- Simple treatments including weight loss, lifestyle changes, and medication are effective in lowering blood pressure.
- Blood pressure medications are very effective at lowering blood pressure, however many of the medications have mild side effects including fatigue and dry cough.
- *For the drugs to work, patients must actually take them. It is estimated that within a year of receiving a prescription, 50% of patients stop taking their blood pressure medication.*

Complications of Hypertension

- Uncontrolled high blood pressure is a serious condition that can lead to stroke, heart attack, heart failure, or kidney failure.
- In pregnant women, hypertension can lead to seizures or death, as well as premature births or stillbirths.

Box 9-2. High Blood Pressure Facts

- According to the American Heart Association (AHA), nearly 1 in 3 U.S. adults has high blood pressure, but because there are no symptoms, nearly one third of these people do not know they have it. In fact, many people have high blood pressure for years without knowing it.
- More men than woman have hypertension.
- Mexican Americans have a hypertension incidence 5.5% higher than that of whites.
- African Americans have a hypertension incidence 43% higher than that of whites.
- Pregnant women are another high-risk group whether they had hypertension before becoming pregnant or not.
- The newest at-risk population is children and adolescents. As many as 50 million Americans age 6 and older have high blood pressure.
- Blood pressure levels for children and adolescents have risen substantially from 1988 to 2000, in part linked to an increase in prevalence of overweight and obesity. [2] The NHLBI now recommends making blood pressure readings a part of all visits to a pediatrician. [3]
- Hypertension was listed as a primary or contributing cause of death in about 251,000 U.S. deaths in 2000.

EQUIPMENT FOR MEASURING BLOOD PRESSURE

Sphygmomanometer

The most common method to measure blood pressure is by using a manually operated **sphygmomanometer** (sss-fig-no-ma-nom-eter) and a **stethoscope**.

- *Sphygmo* is from the Greek word for “pulse” and *manometer* is defined as “a flat device used to measure pressure.”
- A **stethoscope** is a device that makes sound louder and transfers it to the clinician’s ears.

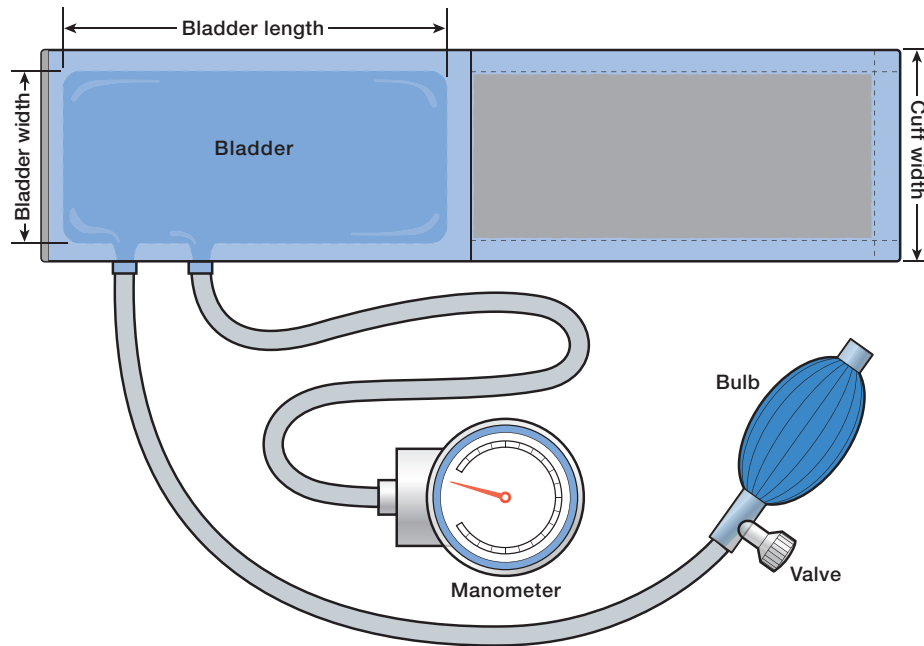


Figure 9-1. The sphygmomanometer. A manual sphygmomanometer consists of:

- A **cuff**—an airtight, flat, inflatable bladder (pouch) covered by a cloth sheath
- A **bulb**, which is squeezed to fill the cuff with air
- A **manometer**—a gauge that measures the air pressure in millimeters

Manometer Gauge

A **manometer** is the device that measures the air pressure in the inflatable pouch in millimeters. The two traditional types of manometers are aneroid gauges and mercury column gauges (Fig. 9-2).

- I. **Aneroid manometers** use a round dial-type gauge to indicate the pressure reading.
 - The aneroid gauge is the most commonly used type of manometer in a dental office setting.
 - This type usually is fastened to the blood pressure cuff during use.
 - Aneroid manometers require regular checks for common defects such as non-zeroed gauges, cracked face plates, or defective rubber tubing. [4]
 - These gauges should be validated for accuracy against a standard mercury manometer at 6-month intervals. [5,6] Refer to Ready Reference 9-8 in the Ready References section.
 - To ensure regular maintenance, the calibration due date should be clearly marked on each gauge.

2. A **mercury manometer** is a device with a column of mercury to indicate the pressure reading.
- Mercury manometers are considered the gold standard measuring devices for blood pressure determination.
 - This type may be placed on a table or mounted on the wall.
 - Similar to mercury thermometers, mercury manometers pose a health threat if the manometer is broken causing the mercury to spill.



Figure 9-2. Types of manometers. (A) An aneroid manometer is a small, round dial with a needle that indicates the pressure. (B) A mercury manometer is a device with a column of mercury that indicates the pressure. (Figure used with permission from Carter PJ, Lewsen S. *Lippincott's Textbook for Nursing Assistants*. Philadelphia: Lippincott Williams & Wilkins; 2005.)

Stethoscope

A **stethoscope** is a device that makes sound louder and transfers it to the clinician's ears. The stethoscope has the following parts (Fig. 7-3):

1. **Earpieces**, which are placed in the clinician's ears.
2. A **brace** and **binaurals**, which connect the earpieces to the tubing that conducts the sound.
3. An **amplifying device**, which makes the sound louder; it may be two-sided with a diaphragm and bell or one-sided with only a diaphragm.
 - The **diaphragm** has a large flat surface that is used to hear loud sounds such as the blood rushing thorough the arteries.
 - The **bell** has a small rounded surface that is designed to hear faint sounds such as heart murmurs.

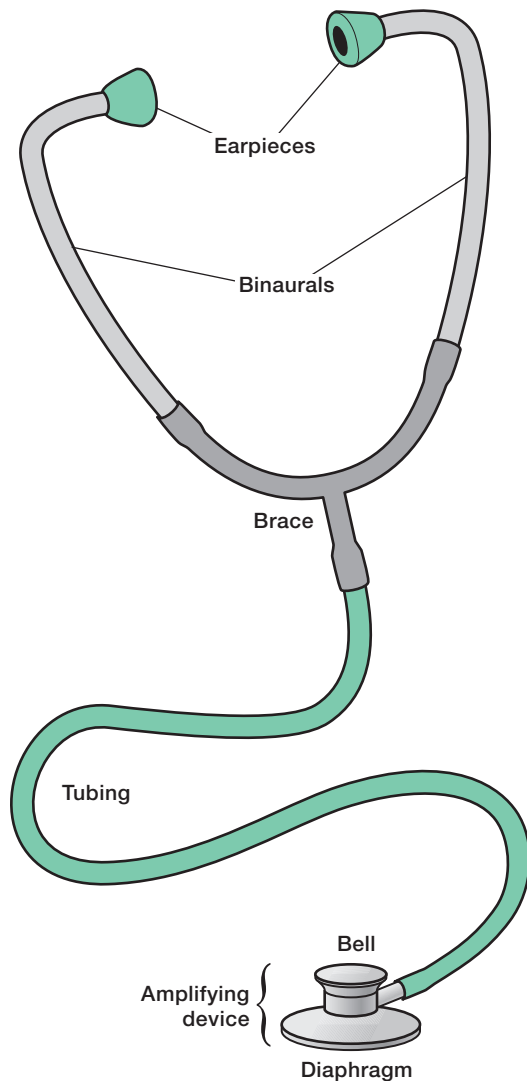


Figure 9-3. Parts of a stethoscope. A stethoscope has the following parts: earpieces, a brace, binaurals, and an amplifying device. The amplifying device may be two-sided, with a diaphragm on one side and a bell on the other.

Automatic Blood Pressure Equipment

Automatic blood pressure equipment—also called digital or electronic blood pressure equipment—ranges from the highly calibrated types used in hospital settings to less advanced equipment designed for home use.

1. **Electronic Battery-Powered Devices.** The most common types of automatic blood pressure equipment found in the dental setting are electronic battery-powered devices.
 - These devices use a microphone instead of a stethoscope to detect the blood pulsing in the artery.
 - The cuff connects to an electronic monitor that automatically inflates and deflates the cuff when the start button is pressed. There are two types of cuffs: arm and wrist cuffs.
 - A monitor displays the blood pressure reading as a digital display.
2. **Pros and Cons of Electronic Equipment.**
 - Pro: These devices are easiest to use.
 - Con: These devices can be expensive.
 - Con: Many automatic devices do not provide accurate readings.

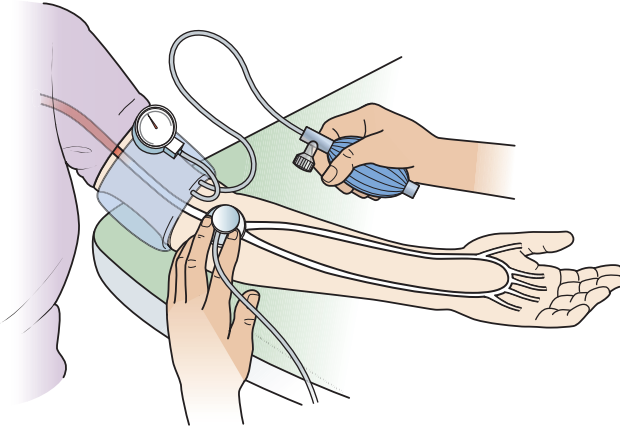
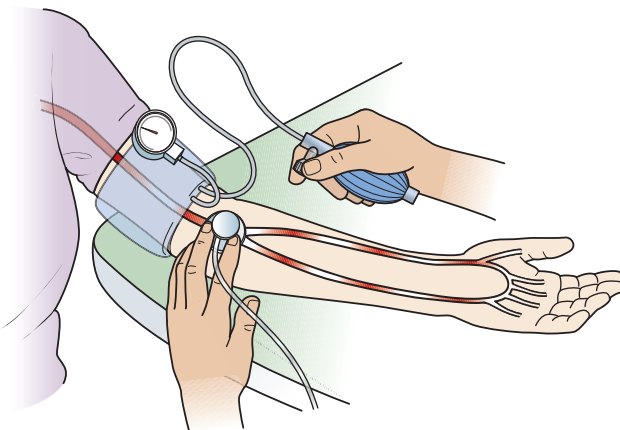
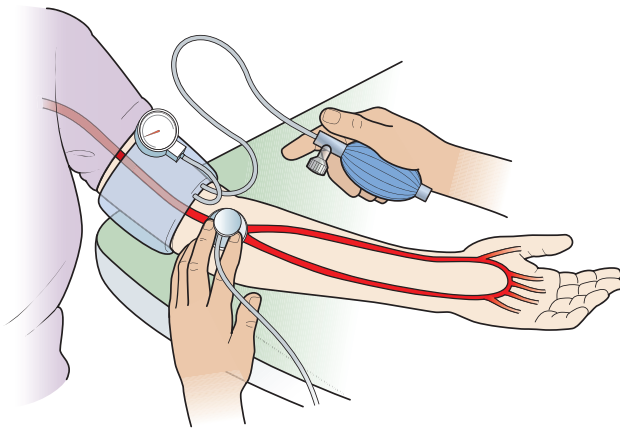
3. Precautions for Use.

- The main source of error with automatic devices is that the cuff has not been positioned at the level of the heart when the reading is taken. Some devices, such as Omron devices (Fig. 9-4), have advanced positioning sensors (APS). Automatic devices with APS will not take a blood pressure reading unless the cuff is at heart level.
- All automatic equipment should be verified using a traditional sphygmomanometer and a stethoscope before its use in a dental setting. An automated device that does not provide readings that are within 1 mm of those obtained with a traditional sphygmomanometer and a stethoscope should not be used in the dental setting. Furthermore, the automatic device must be checked monthly for continued accuracy.
- An abnormally high or low reading obtained with an automatic device should be verified by retaking the blood pressure in a few minutes using a traditional sphygmomanometer and a stethoscope.



Figure 9-4. Automatic blood pressure device. The Omron HEM-780 automatic blood pressure device has been tested for accuracy against two protocols: the Association for the Advancement of Medical Instruments (AAMI) and the International Protocol of the European Society of Hypertension. In March 2001, the *British Medical Journal* published the results of tests on 23 home blood pressure devices. Of the 23 devices tested only 5 were recommended, all 5 were Omron products. (Courtesy of Omron Health care, www.omronhealth-care.com)

TABLE 9-1. Effect of Blood Pressure Cuff on Blood Flow

Action	Auscultatory Findings
Cuff Pressure Stops all Blood Flow 	Silence The cuff is wrapped around the upper arm and inflated. The pressure of the cuff compresses the brachial artery in the arm like a tourniquet, momentarily stopping the blood flow to the lower arm. With the blood flow to the lower arm temporarily stopped, no sounds can be heard through the stethoscope.
Blood Moves Through Compressed Artery 	Sounds of turbulent flow Next, air in the cuff is slowly released and blood begins to push its way through the artery. • The blood flows through in spurts causing vibrations in the artery walls that can be heard through the stethoscope (Fig 8.6). • These vibrations are the Korotkoff sounds. • Sounds continue to be heard until the pressure in the artery exceeds the pressure of the cuff.
No Compression—Blood Flows Freely 	Silence The artery is not compressed, blood flows freely through the artery. No sounds are heard through the stethoscope.

RECORDING BLOOD PRESSURE MEASUREMENTS

Millimeters of Mercury

1. **Systolic and Diastolic Readings.** Two readings are recorded for blood pressure.
 - The **systolic reading** is the pressure of the blood flow when the heart beats—the pressure when the first sound is heard. During this stage, the heart is pumping blood through the arteries to the parts of the body.
 - The **diastolic reading** is the pressure between heartbeats—the pressure when the last sound is heard. During this stage, the heart is relaxed and refills with blood before its next contraction.
2. **Millimeters of Mercury.** Blood pressure readings are recorded in **millimeters of mercury** (mm Hg) because the original mercury manometer devices used a column of mercury.
 - The pressure is measured by how high a pulsing artery can push a column of mercury in a manometer.
 - Measurements made with an aneroid manometer also are recorded in mm Hg, despite the fact that these gauges contain no mercury.
3. **Record as a Fraction.** The two blood pressure readings are recorded as a fraction (Box 9-3).
 - The **systolic** reading is the **top** number of the fraction.
 - The **diastolic** reading as the **lower** number in the fraction.
 - For example, if an individual's systolic pressure is 118 mm Hg and the diastolic blood pressure is 78 mm Hg, his blood pressure reading is recorded and read as "118 over 78."
 - Hint: Think "**diastolic is down**" to help you remember that the diastolic reading is the lower number in the fraction.

Box 9-3. Blood Pressure Measurements

Blood pressure measurements are recorded as a fraction with the systolic reading as the top number and the diastolic reading as the lower number in the fraction. A typical blood pressure reading for an adult might be 118/78 mm Hg.

Systolic
Diastolic

**To remember that the diastolic number is the lower number,
think "diastolic = down"**

THE KOROTKOFF SOUNDS

Blood pressure is most often measured by auscultation, using a sphygmomanometer and stethoscope. **Auscultation** is the act of listening for sounds within the body to evaluate the condition of the heart, blood vessels, lungs, or other organs. Most commonly, a stethoscope is used to determine the frequency, intensity, and quality of the sounds. During blood pressure determination, a stethoscope is used to listen to sounds created by the blood as it pushes its way through the constricted brachial artery.

The **Korotkoff** (*ko-rot-kov*) **sounds** are the series of sounds that are heard as the pressure in the sphygmomanometer cuff is released during the measurement of arterial blood pressure (Box 9-4).

Box 9-4. Korotkoff Sounds

PHASE	SOUNDS AND CHARACTERISTICS
1	The first appearance of repetitive, clear tapping sounds that gradually increase in intensity • The first tapping sound is recorded as the systolic pressure
2	A brief period of softer and longer swishing sounds
Gap	Auscultatory gap—in some patients, sounds may disappear altogether for a short time
3	The return of sharper sounds, which become crisper and louder thudding sounds
4	The distinct, abrupt muffling of sounds, which become soft and blowing in quality
5	The point at which all sounds finally disappear completely • Silence occurs as the blood flow returns to normal • The point when the last sound is heard is recorded as the diastolic pressure

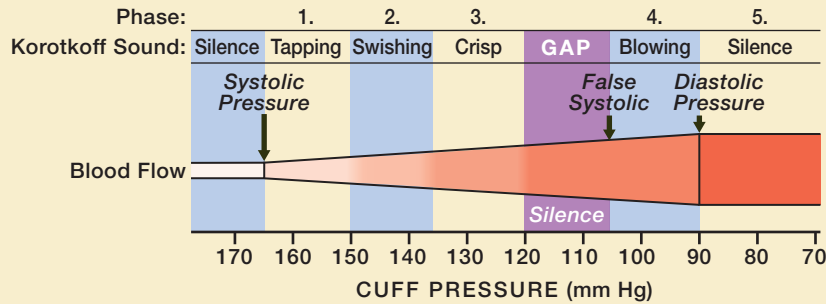
Box 9-5. Impact of an Unrecognized Auscultatory Gap

Figure 9-8. Auscultatory gap. In this example, the fictitious patient exhibits a gap in sounds between 120 mm Hg and 106 mm Hg.

POSSIBLE TECHNIQUE ERROR: GAP MISTAKEN FOR THE SILENT PERIOD BEFORE PHASE I

1. If the cuff is not inflated high enough, the clinician will mistake the gap in sounds as the silent period before the phase I sounds begin.
2. In the example shown in Figure 9-8, if the clinician only inflates the cuff to 116 mm Hg:
 - The auscultatory gap is unrecognized. The clinician mistakes the 106 mm Hg as the start of the Korotkoff sounds.
 - The systolic pressure is significantly underestimated as 106 mm Hg and interpreted as being within the normal range. Instead, the true systolic reading of 150 mm Hg is above the recommended range.

DETECTION OF AUSCULTATORY GAP

Palpation of the brachial or radial pulse during cuff inflation ensures that an auscultatory gap is not mistaken for the start of phase I sounds. [10]

FLUCTUATIONS IN BLOOD PRESSURE

Blood pressure varies from moment to moment and can be influenced by many factors, such as body position, respiration, emotion, anxiety, exercise, meals, tobacco, alcohol, temperature, and pain. Blood pressure also is influenced by age and race and is usually at its lowest during sleep. These influences on blood pressure can be significant, often accounting for rises in systolic blood pressure greater than 20 mm Hg. These factors have to be carefully considered in all circumstances of blood pressure measurement. Insofar as is practical the patient should be relaxed in a quiet room for a short period of time before measurement.

White-coat (or office) hypertension refers to blood pressure that rises above its usual level when it is measured in a health care setting (such as a medical or dental office, where a health care provider may be wearing a white laboratory coat). White-coat hypertension is more common in people who have high blood pressure; and in the dental setting, their blood pressure is remarkably higher than normal. This increase in blood pressure tends to subside once the patient becomes more relaxed as the dental appointment progresses. In many cases, continuing with the extraoral examination and then retaking the blood pressure measurement will yield a lower blood pressure reading.

SECTION 2 CRITICAL TECHNIQUE ELEMENTS

The procedure for the measurement of arterial blood pressure using a sphygmomanometer is well established, and consensus recommendations have been produced by the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (United States), Canadian Hypertension Education Program, British Hypertension Society, and the European Society of Hypertension in the interest of standardization. [11–15] Every person who performs blood pressure assessments should undergo careful training and be aware of common errors in technique. Four of the most critical technique elements for accurate blood pressure determination are the ability to (a) select the proper cuff size, (b) place the cuff, (c) position the patient's arm, and (d) obtain a palpatory estimate of the blood pressure. [4,16–18]

CUFF SIZE

In the case of blood pressure cuffs, one size does not fit all. Proper technique includes selecting the correct cuff size for the patient's upper arm. Each dental office or clinic should have a set of three to four cuffs to fit a variety of arm sizes properly.

- It is the **length and width of the bladder**—not its cloth sheath—that affects the accuracy of blood pressure measurement. [19]
- Cuffs are labeled as child, adult small, adult standard, adult large, and adult thigh. Unfortunately at the current time, there is no universal standardization among manufacturers. For this reason, the bladder dimensions may vary in length and width.
- The AHA guidelines for cuff selection are summarized in Ready Reference 9-1 in the Ready References section of this module.
- Ideally every cuff should be labeled with the dimensions of the enclosed bladder and a line should mark the center of the bladder. The user should mark unlabeled cuffs by outlining the bladder and indicating its midpoint.

Box 9-6. Cuff Size

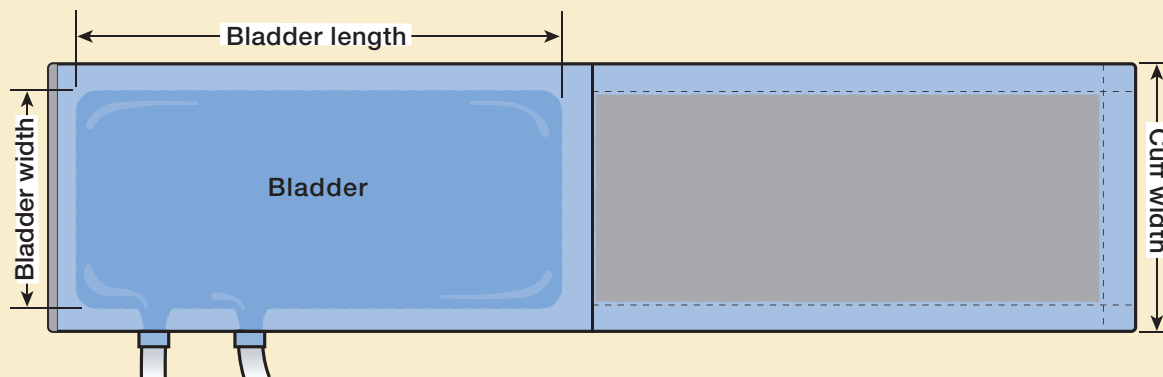


Figure 9-9. Bladder size. The length and width of the bladder are used when selecting the correct cuff size for the patient's arm.

Bladder Length

A tape measure can be used to measure the circumference of the upper arm and this measurement used to select the correct cuff size.

- Too short a bladder will cause overestimation of the blood pressure—false high readings—because the pressure is not evenly transmitted to the brachial artery.
- Too long a bladder may cause under diagnosing of hypertension—false low readings—because the pressure of the cuff is dispersed over too large a surface of the arm.

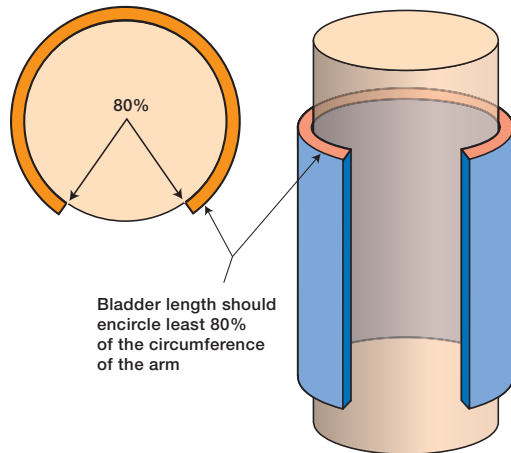


Figure 9-10. Bladder length.

- *The bladder length should encircle at least 80 percent of the midpoint of the upper arm in adults—almost long enough to encircle the arm. [20] (Fig. 9-10)*
- In children younger than 13 years the bladder should encircle 100% of the midpoint of the upper arm.

Bladder Width

- Too narrow a bladder will cause overestimation of the blood pressure—false high readings—because the pressure is not evenly transmitted to the brachial artery.
- Too wide a bladder may cause under diagnosing of hypertension—false low readings—because the pressure of the cuff is dispersed over too large a surface of the arm.

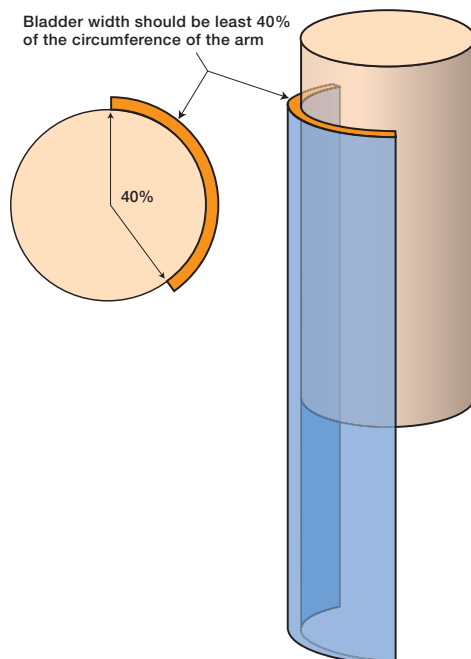


Figure 9-11. Bladder width.

- *It is recommended that the width of the bladder should encircle at least 40% of the midpoint of the upper arm in adults. [20]*
- A cuff that is too small will overestimate the blood pressure.

CUFF PLACEMENT

Anatomic Landmark: Antecubital Fossa

The **antecubital fossa** is the hollow or depressed area in the underside of the arm at the bend of the elbow (Fig. 9-12). During blood pressure determination the antecubital fossa is used as (1) landmark for locating the brachial pulse point, (2) reference point for cuff placement, and (3) reference point for correct arm position.

- The brachial pulse point is located in the antecubital fossa.
- The cuff is placed around the upper arm with the lower edge of the cuff about 1 inch (2.5 cm) above the antecubital fossa.
- The patient's arm is positioned with the antecubital fossa level with the heart.

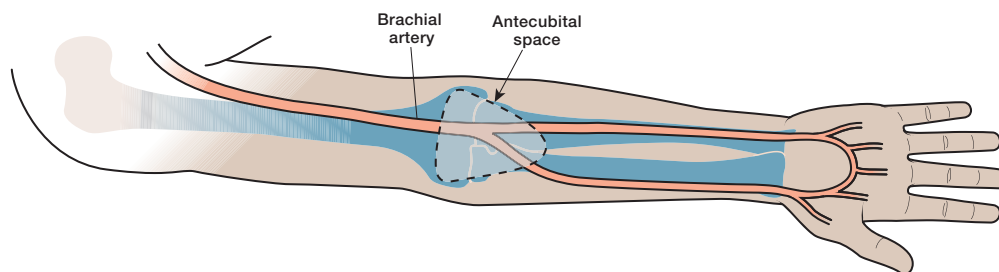


Figure 9-12. Location of the antecubital fossa. The antecubital fossa is the hollow area in the underside of the arm at the bend of the elbow.

ARM POSITION

Proper positioning of the patient's arm is key to obtaining an accurate blood pressure reading. Blood pressure readings go up or down depending on where the arm is positioned. Recommendations of the AHA, Canadian Hypertension Education Program, and British Hypertension Society (BHS) are all in agreement on the arm position.

1. **Seated Position.** *The patient should be seated comfortably with his or her back supported.*
2. **Arm Supported by Clinician.**
 - *The clinician should support the patient's arm by holding it under the elbow.*
 - The phrase "**passively supported arm**" indicates that the weight of the patient's arm should be supported by the clinician rather than held in position by the patient.
 - A rise in blood pressure and heart rate occurs if the patient must tense his or her muscles to support the weight of the arm.
3. **Antecubital Fossa at Midsternum Level.** *The arm should be horizontal with the antecubital fossa at the level of the heart about midsternum. The patient's arm and hand should be relaxed and the elbow slightly flexed (Fig. 9-13).*

False Reading Due to Antecubital Fossa Below Heart Level

- Allowing the patient's arm to hang by the patient's side or on the armrest of a chair can result in false high readings.
- Overestimating the blood pressure in a medical setting might result in over treatment, for example, prescribing blood pressure medication for a patient who does not really need treatment.
- Overestimating the blood pressure in a dental setting might delay needed dental treatment due to concern that the patient is hypertensive.

False Reading Due to Antecubital Fossa Above Heart Level

- Positioning the patient's arm so that the antecubital fossa is above midsternum level can result in false low readings.
- Underestimating the blood pressure in a medical setting, in the worst case, could lead to heart attack or stroke.
- Underestimating the blood pressure in a dental setting is a missed opportunity to identify hypertension and refer the patient to a primary care physician. In addition, it could result in a medical emergency during dental treatment.

Box 9-7. Correct Arm Position for Blood Pressure Assessment

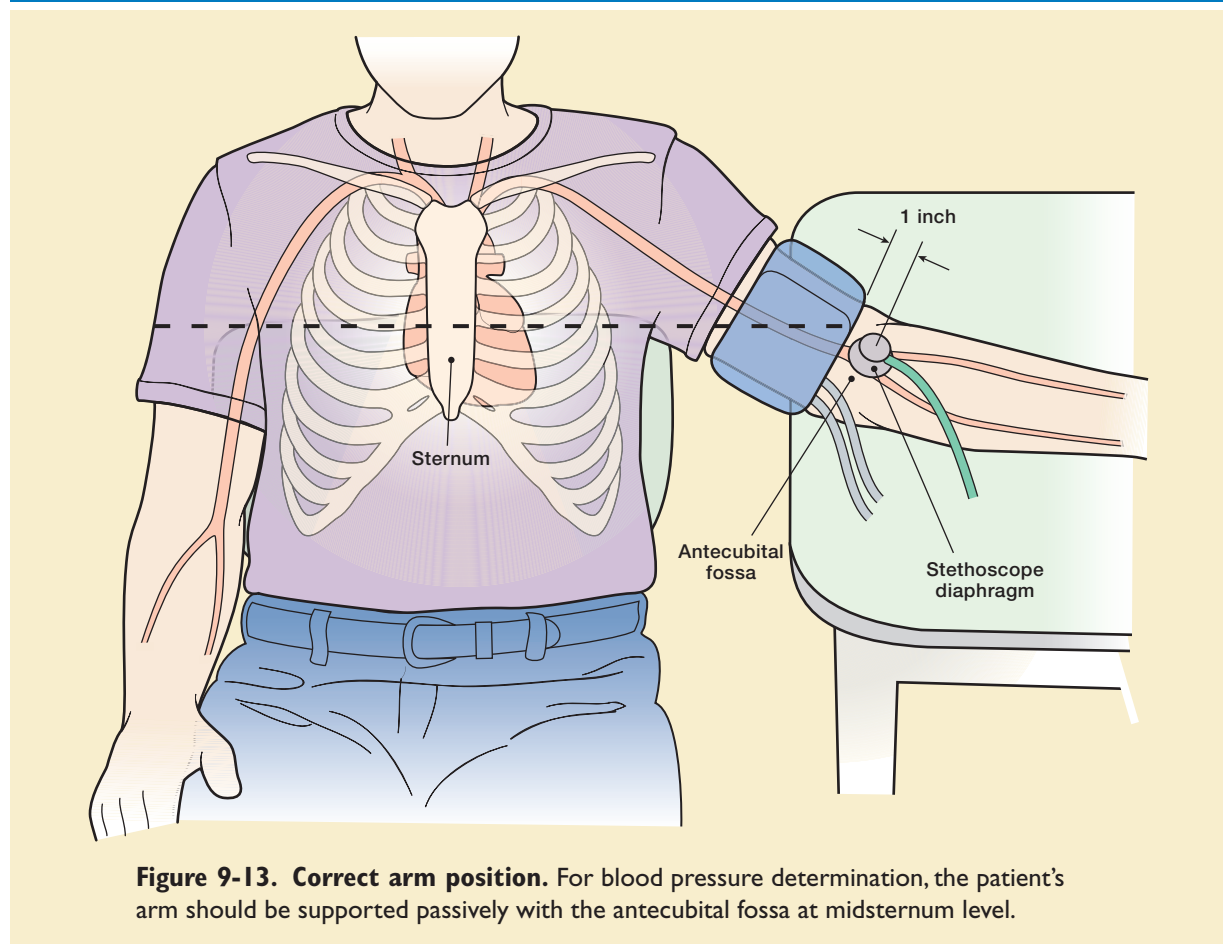


Figure 9-13. Correct arm position. For blood pressure determination, the patient's arm should be supported passively with the antecubital fossa at midsternum level.

PALPATORY ESTIMATION OF BLOOD PRESSURE

To avoid false low systolic pressure readings, the systolic pressure should be estimated before the clinician uses the stethoscope, by palpating the brachial artery pulse and inflating the cuff until the pulsation disappears. This point at which the pulsation disappears is the **estimated systolic pressure**.

- Palpatory estimation is important because the Korotkoff sounds sometimes disappear as pressure is reduced in cuff and reappear at a lower level (auscultatory gap).
- If the systolic pressure is not first estimated by palpation, insufficient inflation of the cuff may cause the clinician to mistake the lower end of the gap as the systolic pressure.
- Measuring palpable pressure first avoids the risk of seriously underestimating blood pressure because of the auscultatory gap.
- The radial artery also is used for palpatory estimation of the systolic pressure, but by using the brachial artery the clinician also establishes its location. Later in the procedure, the stethoscope-amplifying device is placed over the brachial artery to listen for the Korotkoff sounds.
- The brachial pulse point is located just above the antecubital fossa toward the inner aspect of the arm (Fig. 9-14).

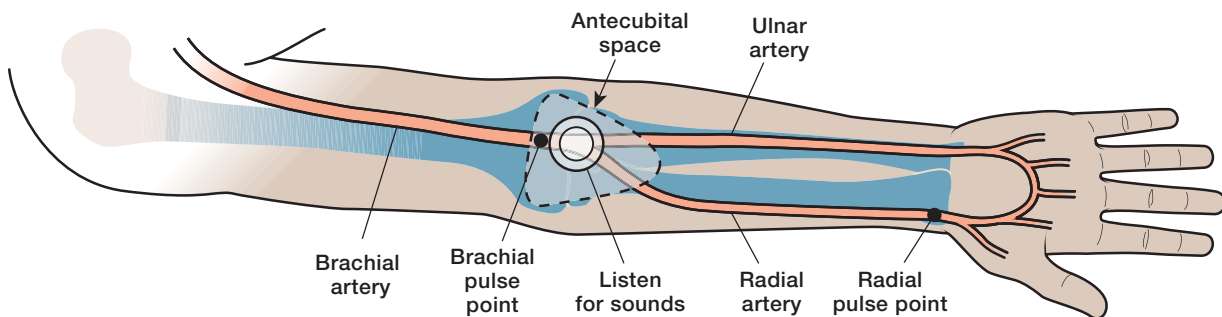


Figure 9-14. Brachial pulse point. The brachial artery is palpated just above the antecubital fossa toward the inner aspect (little finger side) of the arm.

SECTION 3 PEAK PROCEDURES

Procedure 9-1. Blood Pressure Determination

EQUIPMENT

Stethoscope
 Sphygmomanometer known to be accurate
 Blood pressure cuff of the appropriate size
 A watch or clock displaying seconds
 Pen (or computer keyboard)
 Patient chart or computer record

GENERAL CONSIDERATIONS

- The patient should not have had alcohol, tobacco, caffeine, or performed vigorous exercise within 30 minutes of the blood pressure assessment.
- After escorting the patient to the treatment, allow him or her to relax for at least 5 minutes before beginning the vital signs assessment. If a glass thermometer is used for temperature determination, the pulse, respiration, and blood pressure may be assessed while the thermometer is registering the patient's temperature.
- Delay obtaining the blood pressure if the patient is anxious or in pain.
- ***The patient should be sitting in an upright position with his or her back supported and legs uncrossed.[21] The patient should not be moving or speaking during the procedure.***

ACTION

RATIONALE

- | | |
|--|---|
| 1. Briefly explain the procedure to the patient.
If the patient has never had a blood pressure assessment, explain that some minor discomfort is caused by the inflation of the cuff. | <ul style="list-style-type: none"> • Reduces patient apprehension and encourages patient cooperation. |
| 2. Select an appropriate arm—no breast cancer surgery involving lymph node removal on that side, cast, injured limb, or other compromising factor. | <ul style="list-style-type: none"> • Measurement of blood pressure may temporarily impair circulation to the compromised arm. |
| 3. Choose a cuff with an appropriate bladder width and length matched to the size of the patient's upper arm.

Squeeze the bladder to deflate the cuff completely. | <ul style="list-style-type: none"> • Using a cuff with the wrong size bladder may result in inaccurate readings. • Air remaining in the bladder makes it difficult to wrap the cuff around the arm. |

(continued)

Procedure 9-1. Blood Pressure Determination (continued)

ACTION	RATIONALE
4. The patient's upper arm should be bare. The sleeve should not be rolled up if doing so creates a tight roll of cloth around the upper arm.	• Clothing over the artery interferes with the ability to hear sounds. • Tight clothing on the arm causes congestion of blood in the arm and probably results in inaccurate readings. Remove arm from sleeve, if sleeve cannot be rolled up without creating a tight roll of cloth.
5. Ask the patient to assume a comfortable position with the palm of the hand upward.	• There is no need for the patient's arm to be in an uncomfortable position.
6. Position the cuff so that the lower edge is 1 to 2 inches (2 to 3 cm) above the elbow crease. Place the cuff so that the midline of the bladder is centered over the brachial artery. Wrap the cuff smoothly and snugly around the arm. Fasten it securely. The tubing from the cuff should not cross the auscultatory area.	• Allows sufficient space below the cuff so that the amplifying device of the stethoscope can be placed on the brachial pulse point in the antecubital fossa. • Centering the bladder over the brachial artery assures equal compression of the artery by the bladder pressure. • Loose application of the cuff results in over-estimation of the pressure. • Contact of the amplifying device of the stethoscope with the tubing creates noises that make it difficult to hear the Korotkoff sounds.



Figure 9-15. Position the cuff. Position the cuff so that the lower edge is 1 to 2 inches (2 to 3 cm) above the elbow crease and the midline of the bladder is centered over the brachial artery.

(continued)

Procedure 9-1. Blood Pressure Determination (continued)**ACTION****RATIONALE**

7. Place the manometer so the mercury column or aneroid dial is easily visible to the clinician and the tubing from the cuff is unobstructed.

- Improper positioning of the gauge can lead to errors in reading the measurements.
- Instruct the patient not to talk during the blood pressure procedure.

8. Place the earpieces of the stethoscope into the ear canals with the **earpieces angled forward**.

- This forward angle directs the earpieces into the canal and not against the ear itself.



Figure 9-16. Position the earpieces.

Direct the stethoscope earpieces forward so that they will be directed into the ear canals and not against the ear itself.

9. Grasp the patient's elbow with your hand and raise the arm. Support the patient's arm so that the antecubital fossa is at midsternum level. The patient's arm should remain somewhat bent and completely relaxed.

- A lower arm position will result in erroneously high readings.
- A higher arm position will result in erroneously low readings.
- If the patient does the work of holding up the arm, the readings will be elevated.



Figure 9-17. Establish correct arm position.

Support the patient's arm so that the antecubital fossa is at midsternum level.

(continued)

Procedure 9-1. Blood Pressure Determination (continued)

ACTION	RATIONALE
10. Palpate the brachial pulse by gently pressing with the fingertips. Use your free hand to tighten the valve on the air pump. Inflate the cuff rapidly to 70 mm Hg, and then, increase by increments of 10 mm Hg. Note the pressure at which the pulse disappears. This is a rough estimate of the systolic pressure.	• Palpation allows for estimation of the systolic pressure. • The bladder will not inflate unless the valve is completely closed. • The palpatory method is used to avoid under inflation of the cuff in patients with an auscultatory gap or over inflation in those with very low blood pressure.
11. Open the valve, deflate the cuff rapidly leaving it in place on the arm, and wait 15 seconds.	• Allowing a brief pause before continuing permits the blood to refill and circulate through the arm.
12. Gently place the amplifying device of the stethoscope over the pulse—just above the antecubital fossa toward the inner aspect of the arm—but below the lower edge of the cuff. Hold the amplifying device in place with your fingers making sure that it makes contact with the skin around its entire circumference.	• Wedging the amplifying device under the edge of the cuff creates extraneous noise that will distract from the sounds made by the blood flowing through the artery. • Heavy pressure on the brachial artery distorts the shape of the artery and the sound. • Moving the amplifying device produces noise that can obscure the Korotkoff sounds.



Figure 9-18. Position the amplifying device. Hold the amplifying device firmly in place, making sure that the head contacts the skin around its entire circumference.

(continued)

Procedure 9-1. Blood Pressure Determination (continued)**ACTION****RATIONALE**

13. Hold the air pump bulb so that it is easy to reach the valve at the top. Close the valve at the top of the bulb.

- Having the valve within easy reach is important since the other hand is used to hold the amplifying device against the arm.



Figure 9-19. Grasp the air pump bulb. Hold the bulb in your hand so the valve is easy to reach.

14. Using brisk squeezes of the bulb, rapidly inflate the bladder to a pressure 30 mm Hg above the level preciously determined by palpation.

At 30 mm Hg above the systolic estimate, slightly open the valve and release the pressure slowly so that the pressure gauge **drops no faster than 2 mm per second**.

- Rapid inflation of the bladder cuts off the blood flow quickly and intensifies the sounds heard later as the air is slowly released.
- Increasing the pressure above that of the palpated pressure assures a silent period before hearing the first sound.
- A slow cuff deflation rate of 2 mm per second is necessary for accurate readings.

15. Pay careful attention to sounds heard through the stethoscope as the needle on the gauge falls. Listen for the first clear tapping sound (the systolic pressure). Make a mental note of this pressure.

- Systolic pressure is the point at which the blood in the artery is first able to force its way through the vessel. The first clear, tapping sound is the systolic pressure.



Figure 9-20. Note the systolic pressure. Note the systolic pressure reading when you hear the first clear tapping sound.

(continued)

Procedure 9-1. Blood Pressure Determination (continued)

ACTION	RATIONALE
16. Do not reinflate the cuff once the air has been released to recheck the systolic reading. If you are uncertain of the systolic reading, continue releasing air and listen carefully for the diastolic pressure.	- Reinflating a partially inflated cuff causes congestion in the lower arm, which lessens the loudness of the Korotkoff sounds. - Obtain the diastolic pressure, wait 30 seconds and repeat the procedure to obtain the systolic reading.
17. Continue releasing pressure slowly at a rate of 2 mm per second. The sounds should become louder in intensity, then muffle, and then disappear. Listen carefully and note the point at which the sounds disappear (the diastolic pressure).	Diastolic pressure occurs when the blood is able to resume normal flow through the vessel. This smooth flow of blood is silent.
	
18. After the last Korotkoff sound is heard, the cuff should be deflated slowly for at least another 10 mm Hg. Then, allow the remaining air to escape rapidly. If the Korotkoff sounds persist as the pressure level approaches 0 mm Hg, then phase 4 is used to indicate the diastolic pressure.	- Slow deflation for 10 mm Hg ensures that no further sounds are audible. - The AHA recommends using the muffling of sound as the diastolic pressure when recording blood pressure in children.
19. Immediately record the two numbers as a fraction, in whole even numbers. Also record the arm and the patient's position. An auscultatory gap should always be noted (112/76, right arm, seated).	- Recording the pressures promptly helps to ensure accuracy. - It is common practice to read blood pressure to the closest 2 mm number. Do not round off the reading to the nearest 5 or 10 mm digit.

Figure 9-21. Note the diastolic pressure. Note the diastolic pressure reading at the point at which the sounds disappear.

(continued)

Procedure 9-1. Blood Pressure Determination (continued)

ACTION	RATIONALE
20. Blood pressure may be taken in both arms on the patient's initial visit to the dental office or clinic. If there is more than a 10-mm Hg difference between the two arms, the arm with the higher readings should be used at future appointments.	• It is common to have a 5- to 10-mm Hg difference in the systolic reading between the arms. Use the arm with the higher reading for subsequent pressures.
21. Repeat any reading that is outside the expected range, but wait 30 to 60 seconds between readings to allow normal circulation to return to the arm. Be sure to deflate the bladder completely between attempts to check the blood pressure.	• Repeat reading to confirm the accuracy of the original measurement. • False readings are likely to occur if there is congestion of blood in the arm when obtaining repeat readings.
22. Inform the patient and explain the significance of the blood pressure readings.	• The patient is interested in the results. This is an opportunity to educate the patient about hypertension.
	
23. Remove the cuff, and clean and store the equipment.	• Equipment should be left in a manner so that it ready for use.

Figure 9-22. Inform the patient. Tell the patient the reading and explain the significance of the reading.

Procedure 9-2. If Korotkoff Sounds Are Difficult to Hear

If the Korotkoff sounds are difficult to hear, the following technique is recommended:

1. Raise the patient's arm—with cuff in place—over his or her head for 15 seconds before rechecking the blood pressure. Raising the arm over the head helps relieve the congestion of blood in the arm, increases pressure differences, and makes the sounds louder and more distinct when blood enters the lower arm.
2. Confirm that the stethoscope earpieces are angled forward and snugly in ear canals. Move clothing that might be rubbing against tubing.
3. Hold your hands and the tubing as still as possible.
4. Confirm that the amplifying device is over the brachial pulse point and the entire circumference is in contact with the skin.
5. Inflate the cuff rapidly.
6. Inflate the cuff with the antecubital fossa elevated above heart level, and then gently lower the arm while continuing to support it.
7. Deflate the cuff at a steady rate of 2 mm Hg per second while listening for the Korotkoff sounds.

SECTION 4 READY REFERENCES

NOTE: The Ready References in this book may be removed from the book by tearing along the perforated lines on each page. Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

Ready Reference 9-1. Recommended Bladder Dimensions*

CUFF	BLADDER DIMENSIONS (CENTIMETERS)	MAXIMUM ARM CIRCUMFERENCE (CM) **	MAXIMUM ARM CIRCUMFERENCE (INCHES) **
Child	8 × 21 cm	16–21 cm	6.3–8.3 inches
Adult small	10 × 24 cm	22–26 cm	8.7–10.2 inches
Adult standard	13 × 30 cm	27–34 cm	10.6–13.4 inches
Adult large	16 × 38 cm	35–44 cm	13.7–17.3 inches
Adult thigh	20 × 42 cm	45–52 cm	17.7–20.4 inches

* American Heart Association General Guidelines for Cuffs. Measurements in this table from <http://www.americanheart.org/presenter.jhtml?identifier=3000862>.

** Arm circumference as measured at the midpoint of the upper arm. Midpoint of the arm is defined as half the distance from the highest point of the shoulder to the point of the elbow.

Ready Reference 9-2. Classification of Blood Pressure for Adults aged 18 Years or Older [18]

CATEGORY	SYSTOLIC BP IN mm Hg		and	DIASTOLIC BP IN mm Hg
Normal	<120			<80
Prehypertension	120–139		or	80–89
Stage 1 hypertension	140–159		or	90–99
Stage 2 hypertension	≥160		or	≥100

KEY: < = less than; > = greater than; ≥ = greater than or equal to.

NOTE: The patient's blood pressure is determined by the higher value for either the systolic or diastolic blood pressure. [22]

Ready Reference 9-3. Classification of Blood Pressure for Children and Adolescents

Children are considered hypertensive if their pressure is consistently at or above the 95th percentile for their height, age, and gender. **Listed are the average pressures for average height children and adolescents under 18 years of age. [3]**

MALE	AGE	FEMALE
94/52	5	92/54
96/54	6	94/56
96/56	7	98/56
98/58	8	98/58
100/60	9	100/60
102/60	10	102/60
104/60	11	102/60
106/62	12	104/62
108/62	13	106/62
110/62	14	108/64
112/64	15	110/64
116/66	16	112/66
118/68	17	112/66

Ready Reference 9-4. Dental Management of Hypertensive Adults

SYSTOLIC/DIASTOLIC BLOOD PRESSURE	DENTAL MANAGEMENT RECOMMENDATIONS
<140/90	1. Routine dental treatment can be provided; recommend lifestyle modifications (i.e., diet, exercise, quit smoking). 2. Retake blood pressure at continuing care appointment as a screening strategy for hypertension.
140–159/90–99	1. If the initial reading is in this range, retake blood pressure after 5 minutes and patient has rested. Retaking the blood pressure determines the accuracy of the initial readings. 2. Inform patient of blood pressure status; recommend life style modifications. 3. Routine treatment can be provided. Employ stress reduction strategies. Refer to Box 4-3 in Module 4 to review Strategies for Stress Reduction. 4. Measure prior to any appointment. If patient has measurements above normal range on three separate appointments—and is not under the care of a physician for hypertension—refer for medical evaluation.
160–179/100–109	1. Retake blood pressure after 5 minutes and patient has rested. 2. If still elevated, inform patient of readings. 3. Refer for medical evaluation within 1 month; delay treatment if patient is unable to handle stress or if dental procedure is stressful. If local anesthesia is required, use 1:100,000 vasoconstrictor. 4. Routine treatment can be provided. Employ stress reduction strategies during dental treatment.
≥180/≥110	1. Retake blood pressure after 5 minutes and patient has rested. 2. Delay dental treatment until blood pressure is controlled. 3. Refer to physician for immediate medical evaluation. Require a medical release form from the patient's physician prior to dental treatment. 4. If emergency dental care is needed, it should be done in a setting in which emergency life support equipment is available, such as a hospital dental clinic.
KEY: < = less than; > = greater than; ≥ = greater than or equal to. The patient's blood pressure is determined by the higher value for either the systolic or diastolic blood pressure. [22] Adapted with permission from Pickett, FA and Gurenlian, JR: The Medical History: Clinical Implications and Emergency Prevention in Dental Settings. Lippincott Williams & Wilkins 2005: Table 1–3, pg 9.	

Ready Reference 9-5. Assessing Pediatric Patients

AGE	KEYS TO SUCCESSFUL INTERACTION	CHARACTERISTICS
Preschooler (3–6 years)	• Explain actions using simple language • Tell child what will happen next • Tell child if something will hurt • Distract child with a story • Praise good behavior	• Normally alert, active • Can sit still on request • Can cooperate with the assessment • Understands speech • Will make up explanations for anything not understood
School-age child (6–12 years)	• Explain actions using simple language • Explain procedure immediately before performing • Let child make treatment choices when possible • Allow child to participate in examination	• Will cooperate if trust is established • Wants to participate and retain some control
Adolescent (12–17 years)	• Explain the process as to an adult • Treat the adolescent with respect • Encourage questions	• Able to make decisions about care • Has clear concepts of future

Ready Reference 9-6. Factors Affecting the Accuracy of Blood Pressure Measurement

- **Time of Day**—blood pressure readings are usually lowest in the morning and can increase by as much as 10 mm Hg later in the day
- **Position**—blood pressure generally is lower when a person is lying down, compared to when sitting or standing
- **Arm**—there are pressure differences of more than 10 mm Hg between the arms in 6% of hypertensive patients
- **Eating**—blood pressure readings usually are slightly higher after a meal, especially if the meal is high in salt content
- **Exercise**—strenuous activity will temporarily increase the systolic blood pressure
- **Stress**—anxiety, fear, or pain will temporarily raise a person's blood pressure

Ready Reference 9-7. Causes of Inaccuracies in Blood Pressure Measurement

PROBLEM	RESULT	SOLUTION
Equipment		
Stethoscope ear pieces plugged	Difficulty hearing sounds	Clean ear pieces
Ear pieces fit poorly	Distorted sounds	Angle ear pieces forward
Aneroid needle not at zero	Inaccurate reading	Recalibrate gauge
Bladder too narrow for arm	Inaccurate high reading	Bladder 80% of circumference
Bladder too wide for arm	Inaccurate low reading	Use appropriate cuff size
Faulty valve	Difficulty inflating cuff	Replace equipment
Leaky tubing or bulb	Inaccurate reading	Replace equipment
Patient position		
Patient arm not at heart level	Inaccurate readings	Position patient with the antecubital fossa at mid-sternum
Patient legs dangling	Inaccurate high reading	Legs supported
Back unsupported	Inaccurate high reading	Support back
Cuff placement		
Cuff wrapped too loosely	Reading too high	Rewrap more snugly
Applied over clothing	Inaccurate reading	Remove arm from sleeve
Amplifying device		
Amplifying device not in contact with skin	Extraneous noise	Place amplifying device correctly
Amplifying device applied too firmly	Diastolic reading too low	Place amplifying device correctly
Amplifying device not over artery	Sounds difficult to hear	Place amplifying device over palpated artery
Amplifying device touching tubing or cuff	Extraneous noise	Place below edge of cuff
Failure to palpate brachial pulse	Underestimation of systolic pressure	Routinely check systolic pressure by palpation first
Pressure/inflation		
Inflation level too high	Patient discomfort	Inflate to 30 mm Hg above palpatory blood pressure
Inflation level too low	Underestimation of systolic pressure	Inflate to 30 mm Hg above palpatory blood pressure
Inflating cuff too slowly	Patient discomfort; overestimation of diastolic pressure	Inflate the cuff as rapidly as possible
Cuff pressure released too fast	Underestimation of systolic pressure; overestimation of diastolic pressure	Release pressure no faster than 2 mm Hg per second
Cuff pressure released too slowly	Congestion of blood in forearm; sounds difficult to hear	Remove cuff; ask patient to elevate the arm, then open and close the fist several times
Readings		
Rounding off readings to 0 or 5	Inaccurate readings	Record to nearest 2 mm Hg
Intra-arm difference	Pressure differences of more than 10 mm Hg between arms	Initially, measure BP in both arms; use arm with higher reading at subsequent appointments

Ready Reference 9-8. Equipment Maintenance

General maintenance

- Check the cuff for any breaks in stitching or tears in fabric.
- Check the tubing for cracks or leaks, especially at connections.
- Look to see that the aneroid needle on the gauge is at zero.

Marking the cuff

Unfortunately, not all manufacturers are using the same guidelines to mark blood pressure cuffs. Many cuffs are marked incorrectly; therefore, you will have to mark each cuff correctly.

- The center of the bladder should be positioned over the brachial artery. Locate the center by folding the bladder in half.
- Mark the middle with an “x.”
- This is where the cuff should cross the brachial pulse.

Calibrating an Aneroid Manometer

The aneroid manometer—because of its design—is prone to mechanical problems that can affect its accuracy. Aneroid gauges require regular calibration and checks for common defects such as nonzeroed gauges, cracked face plates, or defective rubber tubing. [4] The needle of the aneroid gauge should rest at the zero point before the cuff is inflated and return to zero when the cuff is deflated.

Aneroid manometers should be handled gently to avoid decalibration and require routine maintenance. Every 6 months, the accuracy of the aneroid gauge should be checked at different pressure levels by connecting it with a Y-piece to the tubing of a standardized mercury column manometer.

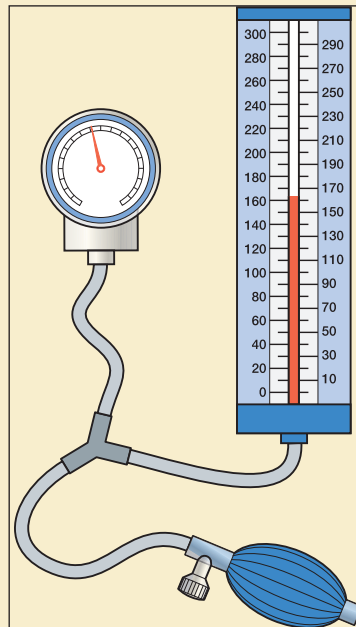


Figure 9-23. Calibration of an aneroid manometer. A Y-tube is used to calibrate the aneroid manometer with a mercury manometer.

Ready Reference 9-9. Internet Resources: Blood Pressure

<http://www.americanheart.org/presenter.jhtml?identifier53010943>.

An updated version of the 1993 AHA Scientific Statement on Human Blood Pressure Determination by Sphygmomanometer. A PDF of the updated 2001 version may be downloaded from the **American Heart Association** website.

<http://www.nhlbi.nih.gov/guidelines/hypertension/index.htm>

Link to *The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)* on the **National Heart, Lung, and Blood Institute's** website.

http://www.nhlbi.nih.gov/health/prof/heart/hbp/hbp_ped.htm

The Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents on the **National Heart, Lung, and Blood Institute's** website.

<http://www.abdn.ac.uk/medical/bhs>

Recommendations on blood pressure measurement on the **British Hypertension Society** website.

<http://www.nlm.nih.gov/medlineplus/highbloodpressure.html>

The **MEDLINE Plus** website has links to a wealth of information on blood pressure including overviews, diagnosis, treatment, symptoms, prevention, screening, diagrams, health check tools, nutrition, and organizations.

<http://www.diabetes.org/weightloss-and-exercise/weightloss/metabolicsyndrome.jsp>

Information on *metabolic syndrome* on the website of the **American Diabetes Association**.

<http://www.diabetes.org/diabetes-cholesterol/news-hypertension.jsp>

This link is to an article about undiagnosed and untreated hypertension in diabetics found on the website of the **American Diabetes Association**.

<http://www.diabetes.org/type-1-diabetes/well-being/link-healthprof.jsp>

The website of the **American Diabetes Association** has extensive information on diabetes and high blood pressure. Go to this website and then click on *Issue 2: Hypertension and Diabetes* to download a PDF document on this subject.

<http://sln.fi.edu/biosci/healthy/pressure.html>

The **Franklin Institute Online** website information on blood pressure.

<http://www.med.umich.edu/libr/heart/highbp03.htm>

Information on blood pressure from the **University of Michigan Health System**.

http://www.pueblo.gsa.gov/cic_text/health/hbptreat/index.htm

Information on high blood pressure from the **National Institutes of Health**.

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SECTION 5 THE HUMAN ELEMENT

Box 9-8. Through the Eyes of a Student

Just a few weeks ago, I saw Mrs. P., an 81-year-old patient for her fourth appointment. Mrs. P. is under the care of a physician for blood pressure control and reported taking Toporal 25 mg/day and Prevacid. She had recently been taken off of potassium and had a recent history of low blood pressure. Her blood pressure was 132/92 mm Hg. I doubled-checked the blood pressure reading to make sure it was accurate. I was a bit concerned about these readings since her blood pressure had ranged from 118/80 mm Hg to 122/78 mm Hg on her other three visits. I asked Mrs. P. how she has been feeling and she said that she was having a feeling of pressure in her chest. I discussed the blood pressure reading and her symptoms with the dentist. The dentist consulted with her physician who requested that EMS transport her to the hospital.

On the way to the hospital, Mrs. P. fainted in the ambulance. Medical tests showed that she had a 96% blockage in one carotid artery and 60% blockage in the other. This experience taught me that it really is important to take vital signs seriously. It is also important to check today's readings with prior readings to look for changes.

Charles, student,
Catawba Valley Community College

TABLE 9-2. English to Spanish Phrase List for Blood Pressure Assessment

How are you feeling today?	¿Como se siente hoy?
Do you smoke?	¿Usted fuma?
How many minutes has it been since you smoked a cigarette, cigar, or pipe?	¿Cuanto tiempo ha pasado desde la última vez que fumaste?
Did you drink coffee or alcohol before coming here today?	¿Usted ha tomado café o bebida que contiene alcor antes de venir hoy?
About how long ago was that?	¿Hace cuanto tiempo?
Have you been exercising?	¿Usted ha estado asiendo ejercicio?
I am going to take your blood pressure.	Voy a tomar su presión.
Your blood pressure is a clue to the health of your heart and blood vessels.	La presión es una indicación a el estado de su corazón y venas.
Have you had your blood pressure taken before?	¿Le han tomado la presión ante?
I am going to pump air into this cuff to take your blood pressure. The cuff will squeeze your arm quite tightly as I pump it up. Then I will begin to release the air from the cuff and you will be more comfortable.	Yo voy ha bombear aire adentro de este cuño de presión, y el cuño apretara su brazo. En un minuto empezare ha dejar que el aire se escape de el cuño, y usted estará mas cómodo.
Do you have any questions?	¿Usted tiene alguna pregunta?
Would you please roll up your sleeve?	Por favor suva su manga.
Please turn your arm over with the palm facing up.	Por favor gire su brazo con la palma cara arriba.
Just relax; this will only take a few minutes.	¡Tranquilízate! Esto tomara nadamas unos minutos.
Please remain still and do not talk while I take your blood pressure.	Por favor quédese quieto mientas tomo su presión.
Just relax your arm and hand; let me support your arm for you.	Relajar su brazo y mano, y déjame soportar su brazo.

(continued)

TABLE 9-2. English to Spanish Phrase List for Blood Pressure Assessment (continued)

I will need to take your blood pressure reading again.	Necesito tomar su presión otra vez.
Please raise your arm up like this for a few seconds.	Suba su brazo arriba haci por unos segundos.
Your blood pressure reading is: (Write reading on piece of paper and show to patient.)	Su presión es:
This is a normal blood pressure reading.	Su presión esta normal.
This reading is just a bit higher than recommended.	Su presión esta un poco mas alta que se recomienda.
This reading is higher than recommended.	Su presión es mas alta que se recomienda.
This reading is higher than it was when you were here before.	Su presión esta mas alta que la ultima ves que usted vino aquí.
Do you know what your blood pressure is usually?	¿Usted sabe cual es su presión normalmente?
Since your blood pressure is a bit higher than ideal, I would recommend that you see your regular doctor and ask him or her to check it.	Porque su presión es un poco mas alta que normal, le recomendó que valla a ver su medico y le pida que investige.
I am concerned that your blood pressure is high today. We will not be able to do any dental treatment today. Please make an appointment with your physician as soon as possible. I will need your physician to sign this form before we can schedule your next dental appointment.	Estoy preocupada que su presión esta alta. No vamos hacer ningún tratamiento hoy. Por favor haga una cita con su medico lo mas pronto posible para investigar, y que el llene y firme esta forma. Esta forma es necesaria para hacer una nueva cita para tratamiento dental.
Yes, we record everything on a computer now. It is secure, only my clinic instructor and I can see your record.	Su expediente dental esta en forma electrónica, pero esta protegido. Namas que el instructor(a) clínico y yo podemos ver su expediente dental.
Are you nervous about the dental treatment today?	¿Esta nervioso sobre su tratamiento dental hoy?
I am going to get my clinic instructor.	Voy ha buscar a mi instructor(a) clínico.

SECTION 6 PRACTICAL FOCUS—FICTITIOUS PATIENT CASES FOR VITAL SIGNS MODULES

DIRECTIONS:

- The fictitious patient cases in this module involve patients A–E. In a clinical setting, you will gather additional information about your patient with each assessment procedure that you perform. In a similar manner, you will learn additional assessment findings for patients A–E in Modules 10–16.
- In answering the case questions in this module, you should take into account the health history and over-the-counter/prescription drug information that was revealed for each patient in Module 4, Medical History.

FICTITIOUS PATIENT CASE A: Mr. Alan Ascari

Synopsis of Information about Mr. Ascari

Mr. Ascari is a new patient in the dental office. You notice that Mr. Ascari seems to be slightly impatient. As you count his pulse rate, he suddenly removes the thermometer from his mouth and says, “I have had enough of this! First, you ask me all those questions about my health and now, this. I just came in to have my teeth checked, not for a medical exam! Can’t you just check my teeth and get it over with?”

Vital Signs	
Name <u>ALAN ASCARI</u>	Date <u>1/15/XX</u>
Temperature <u>98.4°F</u>	Pulse _____
Respiratory Rate _____	Blood Pressure _____
Tobacco Use: ☐ Never ☐ Former	
☒ Cigarettes <u>2</u> packs/day	☐ Pipe ☒ Smokeless tobacco

Case Questions for Mr. Ascari

1. How do you think Mr. Ascari is feeling or thinking concerning the health history and vital signs assessment? Why might he feel this way?
2. How would you respond to Mr. Ascari’s comments? How would you phrase your response to him?
3. Do you think that it is important to complete the vital signs assessment on Mr. Ascari before proceeding with treatment? Or, could you skip this procedure just this once since he is a new patient in the office?

FICTITIOUS PATIENT CASE B: Bethany Biddle**Synopsis of Information about Bethany Biddle**

Bethany Biddle is a physically active 9-year-old who has been a patient in the dental office since she was 3 years old. Bethany enjoys coming to have her teeth cleaned. She is interested in dental hygiene and always asks a lot of questions about the care that dental hygienists provide.

Bethany hurried into the office 10 minutes late for her appointment. She tells you that her mother was late picking her up at school. Concerned about being late, she ran from the parking lot to the dental office. Remembering that it is 90° outside, you can understand why she is perspiring and slightly out of breath. Worried about falling behind schedule, you quickly take Bethany's vital signs.

Vital Signs	
Name <u>BETHANY BIDDLE</u>	Date <u>1/0/XX</u>
Temperature <u>100° F</u>	Pulse <u>112</u>
Respiratory Rate <u>36</u>	Blood Pressure <u>102/64</u>
Tobacco Use: ☒ Never ☐ Former	
☐ Cigarettes ___ packs/day ☐ Pipe ☐ Smokeless tobacco	

Case Questions for Bethany Biddle

1. At her last four appointments, Bethany's vital signs were all within normal ranges. Identify possible interpretations of Bethany's vital signs at today's appointment. Are you concerned about these findings and what if any action would you take?
2. Is there anything about the way in which the vital signs assessment was conducted that could have had an impact on the findings?
3. How would you determine if dental treatment is contraindicated for Bethany? If so, what words would you use to explain the contraindications to Bethany?
4. What will you do next?

FICTITIOUS PATIENT CASE C: Mr. Carlos Chavez

Vital Signs	
Name <u>CARLOS CHAVEZ</u>	Date <u>1/05/XX</u>
Temperature <u>98.6° F</u>	Pulse <u>100</u>
Respiratory Rate <u>20</u>	Blood Pressure <u>190/110</u>
Tobacco Use: ☒ Never ☐ Former	
☐ Cigarettes ___ packs/day ☐ Pipe ☐ Smokeless tobacco	

Case Questions for Mr. Chavez

1. Does Mr. Chavez have any contraindications for dental treatment? If so, what are your concerns?
2. What information would you provide to Mr. Chavez about his vital signs readings? How would you phrase your explanation?
3. After discussing his vital signs, what would you do next?

FICTITIOUS PATIENT CASE D: Mrs. Donna Doi**Synopsis of Information about Mrs. Doi**

As you seat Mrs. Doi in the dental chair she tells you that she is grateful for an excuse to get out of the house today. Her 6-year-old daughter, Melanie, has been home sick with a high fever and strep throat for the last several days.

Vital Signs	
Name <u>DONNA DOI</u>	Date <u>1/30/XX</u>
Temperature <u>101.0° F</u>	Pulse <u>80</u>
Respiratory Rate <u>15</u>	Blood Pressure <u>120/76</u>
Tobacco Use: ☒ Never ☐ Former	
☐ Cigarettes ___ packs/day ☐ Pipe ☐ Smokeless tobacco	

Case Questions for Mrs. Doi

1. Are Mrs. Doi's vital signs within normal ranges?
2. What information would you give Mrs. Doi about her vital signs? How would you phrase your explanation?
3. You note that Mrs. Doi's temperature has been 97.7°F at her last three visits. When you inquire how she is feeling today, she replies, "I was very tired this morning and my throat feels dry and scratchy." Are you concerned about Mrs. Doi's elevated temperature reading? Can you think of any possible causes for her elevated temperature?
4. What will you do next?
5. Does Mrs. Doi have any contraindications for dental treatment? If so, what words would you use to explain these contraindications to Mrs. Doi?

FICTITIOUS PATIENT CASE E: Miss Esther Eads**Synopsis of Information about Miss Eads**

Miss Eads has been a patient in the dental practice for 30 years; she is 79 years of age. Miss Eads is a retired teacher and is still very active for her age. She enjoys taking day trips with the seniors group at her church. Miss Eads is here today for a routine check-up.

Vital Signs	
Name <u>ESTHER EADS</u>	Date <u>1/24/XX</u>
Temperature <u>95.8° F</u>	Pulse <u>50</u>
Respiratory Rate <u>15</u>	Blood Pressure <u>118/78</u>
Tobacco Use: ☐ Never ☒ Former	
☐ Cigarettes ____ packs/day ☐ Pipe ☐ Smokeless tobacco	

Case Questions for Mrs. Eads:

1. Are all of Miss Eads' vital signs within normal ranges? What information would you use in determining if her findings today are normal for her?
2. Does Miss Eads have any contraindications for dental treatment? If so, what words would you use to explain these contraindications to Miss Eads?

SECTION 7 QUICK QUESTIONS

1. The blood pressure reading is an indication of a person's:
 - A. Temper
 - B. Heart health
 - C. Blood vessel health
 - D. Both B and C
2. The lowest pressure when the heart relaxes between beats is the:
 - A. Diastolic pressure
 - B. Hypertensive pressure
 - C. Hypotensive pressure
 - D. Systolic pressure
3. The highest pressure that occurs when the blood is propelled through the arteries is termed:
 - A. Diastolic pressure
 - B. Hypertensive pressure
 - C. Hypotensive pressure
 - D. Systolic pressure
4. Blood pressure is recorded as a fraction. Which pressure is recorded as the bottom number in the fraction?
 - A. Diastolic
 - B. Systolic
5. Blood pressure readings are recorded in:
 - A. mmC
 - B. mmF
 - C. mm per minute
 - D. mm Hg
6. Children rarely experience hypertension.
 - A. True
 - B. False
7. When listening to the Korotkoff sounds, the first tapping sound is recorded as the:
 - A. Diastolic blood pressure
 - B. Systolic blood pressure
 - C. The auscultatory gap
 - D. This sound is not recorded

8. The auscultatory gap is estimated with:
- A. The fingers on the brachial or radial pulse
 - B. The stethoscope on the brachial pulse
 - C. The fingers on the brachial pulse and a sphygmomanometer
 - D. A stopwatch
9. The bladder width should encircle at least 80% of the upper arm on an adult. The length of the cloth cuff is used in determining the correct blood pressure cuff size.
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
10. Which of the following is the recommended arm position for the patient during blood pressure assessment?
- A. Arm supported at midsternum level by the clinician
 - B. Arm held above the head by the patient
 - C. Arm resting comfortably on the armrest of the dental chair
 - D. Arm hanging down by the patient's side

SECTION 8 SKILL CHECK

SKILL CHECKLIST BLOOD PRESSURE ASSESSMENT

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Determines that the patient has not had alcohol, tobacco, caffeine, or performed vigorous exercise within thirty minutes of the blood pressure assessment. After seating patient, allows the patient to relax for at least 5 minutes prior to assessment.		
Selects an appropriate arm—no breast cancer surgery involving lymph node removal, cast, injured limb, or other compromising factor.		
Squeezes the bladder to completely deflate the cuff. Selects a cuff with an appropriate bladder width and length matched to the size of the patient's upper arm.		
Asks patient to roll up sleeve. Determines that rolling up the sleeve does not create a tight roll of cloth around the upper arm.		
Asks patient to position arm with the palm of the hand upward.		
Positions the cuff with the lower edge 1 to 2 inches (2 to 3 cm) above the elbow with the midline of the bladder centered over the brachial artery. Wraps the cuff smoothly and snugly around the arm and fastens it securely.		
Places the manometer so that the mercury column or aneroid dial is easily visible and the tubing from the cuff is unobstructed.		
Places the stethoscope earpieces into the ear canals with the earpieces angled forward.		
Supports the patient's arm by holding it at the elbow so that the antecubital fossa is level with the patient's mid-sternum. The patient's arm should remain somewhat bent and completely relaxed.		
Palpates the brachial pulse with the fingertips. Closes the valve. Inflates the cuff rapidly to 70 mm Hg and then increases the pressure by increments of 10 mm Hg until the pulse disappears. Notes the pressure reading where the pulse disappears.		
Opens the valve, deflates the cuff rapidly, leaving it in place on the arm, and waits 15 seconds.		
Gently places the amplifying device over the pulse—just above the antecubital fossa toward the inner aspect of the arm. Holds the device in place making sure that it makes contact with the skin around its entire circumference.		

(Note Skill Checklist continues on the next page)

SKILL CHECKLIST

BLOOD PRESSURE ASSESSMENT (continued)

Criteria:	S	E
Closes the valve and holds the bulb so that it is easy to reach the valve at the top. Briskly squeezes the bulb to rapidly inflate the bladder to a pressure 30 mm Hg above the palpatory estimate.		
Opens the valve so that the pressure drops no faster than 2 mm per second.		
Pays careful attention to sounds heard through the stethoscope. Notes the point at which the first clear tapping sound occurs.		
Continues releasing the pressure slowly at a rate of 2 mm per second. Notes the point at which the sounds disappear.		
Continues releasing the pressure slowly at a rate of 2 mm per second for at least another 10 mm Hg. Then allows the remaining air to escape rapidly.		
Records the two numbers as a fraction—systolic over diastolic—to the closest 2 mm. Records the arm and the patient's position. Records the auscultatory gap, if present.		
Obtains a systolic reading within 2 mm of the evaluator's reading. Obtains a diastolic reading within 2 mm of the evaluator's reading.		
Removes the cuff. Cleans and stores the equipment so that it is ready for use.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (20) equals the Percentage Grade _____		

SKILL CHECKLIST BLOOD PRESSURE ASSESSMENT

Student: _____

Evaluator: _____

Date: _____

Roles:

Student 1 = Plays the role of a fictitious patient.

Student 2 = Plays the role of the clinician.

Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains the blood pressure procedure. If the patient has never had a blood pressure assessment, explains that some minor discomfort is caused by the inflation of the cuff.		
Upon completion of the procedure, reports the findings to the patient and explains whether the readings are normal or outside the normal range and the significance of these readings.		
Encourages patient questions before and after the blood pressure assessment.		
Answers the patient's questions fully and accurately.		
Gains the patient's trust and cooperation.		
Communicates with the patient at an appropriate level and avoids dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment. Uses correct medical and dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total " S "s in each I column.		

Sum of "**S**"s _____ divided by Total Points Possible (7) equals the Percentage Grade _____

NOTES

NOTES

MODULE 10

Tobacco Cessation Counseling

MODULE OVERVIEW

Consumer survey data collected by the American Dental Association (ADA) show that half of all smokers visit the dentist annually. A full 75% of these smokers indicate a willingness to hear advice on quitting from dental health care providers. In a 1992 policy statement, the ADA urges dental health care providers to become fully informed about tobacco cessation intervention techniques and educate their patients in methods for overcoming tobacco addiction.

This module is designed to assist dental health care providers in improving their knowledge of tobacco cessation techniques and resources, including:

- Understanding the health risks of tobacco use
- Understanding the health benefits of not using tobacco
- Providing tobacco cessation counseling

MODULE OUTLINE

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	Communication Skill Checklist: Role-Play Tobacco Cessation Counseling	

SKILL GOALS

- Explain why tobacco cessation counseling is a valuable part of patient care in the dental setting.
- Value the importance of providing tobacco cessation counseling as a routine part of the dental hygiene appointment.
- Give examples of diseases associated with or linked to tobacco use.
- Give examples of oral diseases and conditions associated with tobacco use.
- Differentiate which components of tobacco/cigarette smoke are (1) addicting and (2) carcinogenic.
- Discuss the hazards of secondhand smoke.
- Identify FDA-approved pharmacotherapies for smoking cessation.
- Explain how to use the ADHA's "Ask. Advise. Refer." program to encourage tobacco cessation.
- Demonstrate knowledge of tobacco cessation counseling by applying information from this module to the fictitious patient case and the communication skills role-play at the end of this module.

SECTION 1 HEALTH EFFECTS OF TOBACCO USE

SMOKING: THE FIFTH VITAL SIGN

In addition to the standard vital signs—temperature, pulse, respiration, and blood pressure—tobacco use has been suggested as the fifth vital sign.

- Tobacco use is a contributing factor in many medical conditions and, in addition, increases the risk of periodontal disease. All oral health care professionals should be concerned with their patients' use of tobacco products.
- About 30% of patients in any given dental practice are current smokers.
- The regularly scheduled dental hygiene visit provides a unique opportunity to document tobacco use (Fig. 10-1), relate oral health findings to a patient's use of tobacco, and provide cessation support.

Vital Signs	
Name _____	Date _____
Temperature _____	Pulse _____
Respiratory Rate _____	Blood Pressure _____
Tobacco Use: ☐ Never ☐ Former	
☐ Cigarettes _____ packs/day	☐ Pipe ☐ Smokeless tobacco

Figure 10-1. Vital Signs Box. Tobacco use should be regarded as the fifth vital sign and noted in the patient's chart.

MEDICAL HEALTH RISKS OF SMOKING

Scientific knowledge about the health effects of tobacco use has increased greatly since the first Surgeon General's report published in 1964. Smoking increases the risks of numerous diseases and associated illness and death. In general, smokers have a mortality rate approximately twice that of nonsmokers. Extensive evidence links smoking to cancer, cardiopulmonary disease, and complications of pregnancy.

Tobacco use has long been identified as the leading preventable cause of illness and death; a fact established by the most substantial body of scientific knowledge ever amassed linking a product to disease.

- Tobacco claims one life every eight seconds and kills one of ten adults globally.
- In the United States alone, cigarette use accounts for one of every five deaths and is responsible for more than 435,000 deaths each year. (Fig. 10-2) [1]
- In Canada, more than 37,000 deaths a year are due to smoking (22% of all deaths).
- Smoking causes more deaths alone than AIDS, alcohol, accidents, suicides, homicides, fires, and drugs combined.
- Worldwide, five million people die each year from tobacco use. That number has been projected to double by 2020, with more than 70% of those deaths occurring in developing nations.[2]

Average Annual Number of Deaths in the U.S.
Attributable to Cigarette Smoking, 1997-2001

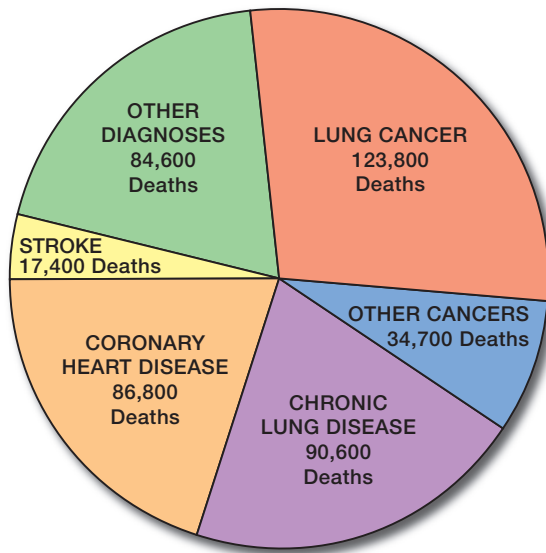


Figure 10-2. Annual Deaths Attributable to Cigarette Smoking. Source: CDC. Cigarette Smoking-Related Mortality (United States, 2001).

Risk factors are conditions that increase a person's chances of getting a disease (such as cancer). There is no doubt that the risk for smoking related disease increases with the amount a person smokes. However, smoking one to four cigarettes per day is associated with a significantly higher risk of prematurely dying.[3] Cigar use causes cancer of the larynx, mouth, esophagus, and lung and emphysema and heart disease. **The bottom line is that smoking any amount harms nearly every organ of the body, damaging a smoker's overall health even when it does not cause a specific illness.** (Fig. 10-3)

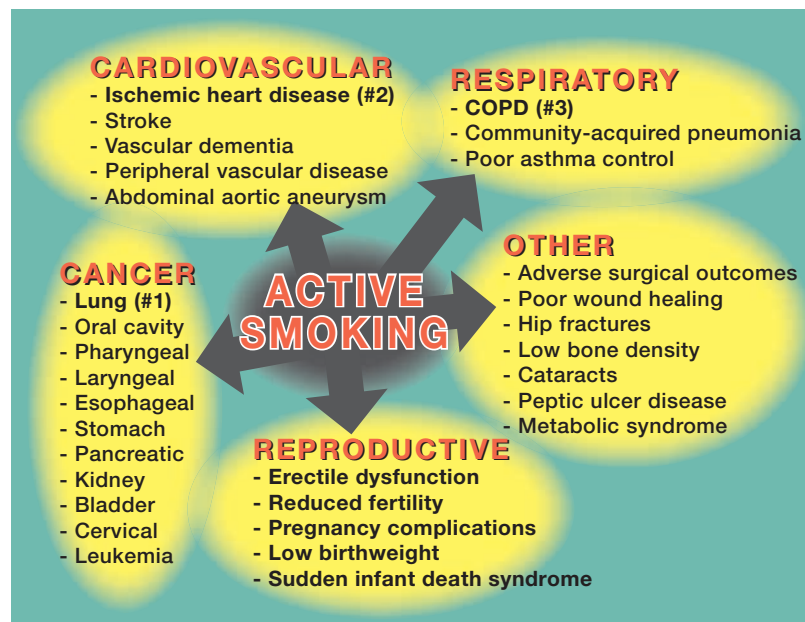


Figure 10-3. Smoking Related Diseases. Adapted from The health consequences of smoking: a report of the Surgeon General. (Atlanta, GA: Dept. of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; Washington, D.C., U.S. G.P.O., 2004.)

Cancer

Smoking is a known cause of multiple cancers, accounting for 25% to 30% of all cases of cancer and approximately 170,000 cancer deaths every year in the United States.[4]

- The types of cancer associated with tobacco use include those that affect the lung, mouth, nasal passages/nose, larynx, pharynx, breast, esophagus, stomach, pancreas, bladder, kidney, cervix, and possibly the colon and rectum, in addition to acute myelogenous leukemia.
- In particular smoking has been linked to 90% of cases of lung cancer in males and 78% in females.[5]

Cardiovascular and Lung Disease

In addition, smoking is a known cause of at least 25% of all heart disease and strokes, and no less than 90% of all chronic obstructive pulmonary disease. Smoking is a major cause of coronary artery disease, cerebrovascular disease (stroke), peripheral vascular disease and abdominal aortic aneurysm.

- **Smoker's cough** is the chronic cough experienced by smokers, because smoking impairs the lung's ability to clean out harmful material. Coughing is the body's way of trying to get rid of the harmful material in the lungs.
- **Chronic obstructive pulmonary disease (COPD)** is a lung disease in which the airways in the lungs produce excess mucus resulting in frequent coughing. Smoking accounts for 80% to 90% of the risk for developing COPD. Only 5% to 10% of patients with COPD have never smoked.
- **Coronary artery disease (CAD)**—a thickening of the coronary arteries—is the most common type of heart disease. CAD results in a narrowing of the arteries so that the supply of blood and oxygen to the heart is restricted or blocked. Smoking is the major risk factor for CAD.
- **Peripheral vascular disease (PVD)** occurs when fat and cholesterol build up on the walls of the arteries blocking the blood supply to the arms and legs.
- **Abdominal aortic aneurysm** occurs when part of the aorta—the main artery of the body—becomes weakened. If left untreated, the aorta can burst. Once thought of as an “old man's disease,” this disorder has become a major killer in women as well. The disease kills 120,000 Americans a year, is the fourth leading cause of death, and is expected to be the third leading cause of death by 2020.[5]

Health Risks for Female Smokers

Smoking during pregnancy causes spontaneous miscarriages, low birth weight, placental abruption, fetal heart defects, and sudden infant death syndrome. Babies born to women who smoke are more likely to be premature. Women, particularly those older than 35 years of age who smoke and use birth control pills, face an increased risk for heart attack, stroke and venous thromboembolism.

Other Conditions

Other conditions that affect smokers include: cataracts, macular degeneration, damage to skin, poor dental health, low bone density, early menopause, gastroesophageal reflux, high blood pressure, Type 2 diabetes, psoriasis, erectile dysfunction, infertility, and fire-related injury or death.

Head and Neck Cancer

Smoking also significantly increases the risk for head and neck cancers (more than 500,000 people are diagnosed with these cancers every year). In general, individuals who smoke one pack per day increase their head and neck cancer risk by tenfold and individuals who smoke two packs per day increase their risk to 25 times that of a non-smoker.[4]

HEALTH RISKS TO THE PERIODONTIUM

The Periodontium

The past effects of smoking on the periodontium, such as bone loss, cannot be reversed; however, smoking cessation is beneficial to the periodontium.

- Several years after quitting, former smokers are no more likely to have periodontal disease than persons who have never smoked. This indicates that quitting seems to gradually erase the harmful effects of tobacco use on periodontal health.
- **Evidence that periodontal health does improve with smoking cessation has led the American Academy of Periodontology to recommend tobacco cessation counseling as an important component of periodontal therapy.**
- Dental hygienists should advise patients of tobacco's negative effects on the periodontium and the benefits of quitting tobacco use. ("As your clinician, I need you to know that quitting smoking is the most important thing you can do to protect your current and future dental health.")

Smoking and Periodontitis

Smoking appears to be one of the most important risk factors in the development and progression of periodontal disease. Smoking may be responsible for more than half of the cases of periodontal disease among adults in the United States.[6]

- Smokers are 2.6 to 6 times more likely to exhibit periodontal destruction than non-smokers.[7] Tobacco use is therefore one of the most significant risk factors in the development and progression and successful treatment of periodontitis.
- Smokers are 12 to 14 times more likely than non-smokers to have severe bone loss.[7]
- Tobacco smoking may play an important role in the development of forms of periodontitis that does not respond to treatment (Fig.10-4) despite excellent patient compliance and appropriate periodontal therapy. [8]



Figure 10-4. Poor Healing After Periodontal Surgery. Shown here is a poor healing response to periodontal surgery in a smoker. (Courtesy of Dr. Ralph M. Arnold, Department of Periodontics, University of Texas Health Science Center at San Antonio, TX)

- Smokers lose more teeth than non-smokers. Only about 20% of people older than 65 years of age who have never smoked are toothless, whereas 41.3% of daily smokers older than 65 are toothless.
- Current smokers are about four times more likely than people who have never smoked to have advanced periodontal disease.[9] Even in adult smokers with generally high oral hygiene standards and regular dental care habits, smoking accelerates periodontal disease.
- The extent of periodontal disease is directly related to the number of cigarettes smoked and the number of years of smoking. The more a person smokes and the longer a person smokes, the more periodontal disease that individual will have.
- Gingival inflammation and gingival bleeding, two of the cardinal signs of periodontal disease, are often reduced or absent in smokers. **For this reason, great care should be taken in performing periodontal screening and examination of smokers. In smokers, the lack of bleeding on probing does not indicate healthy tissue as it does in non-smokers.**[9]
- Cigarette smoking may be a cofactor in the relationship between periodontal disease and chronic obstructive pulmonary disease and in the relationship between periodontal disease and coronary heart disease.[9]

HEALTH RISKS OF SMOKELESS TOBACCO

Smokeless Tobacco

- Smokeless tobacco is tobacco that is not smoked but used in another form. Snuff and chewing tobacco are the two main forms of smokeless tobacco in use in the United States and Canada.
- Chewing tobacco—also known as, spit tobacco, chew, dip, and chaw—is tobacco cut for chewing.
- Snuff is a smokeless tobacco in the form of a powder that is placed between the gingiva and the lip or cheek or inhaled into the nose.
- Smokeless tobacco was formally classified as a “known human carcinogen” by the U.S. government in 2000. **Smokeless tobacco contains more nicotine than cigarettes.**



Figure 10-5. Oral Effects of Smokeless Tobacco. (A) Gingival recession, red sores, and decayed root surfaces at the site of placement of smokeless tobacco. (B) A white patch at the site of placement of smokeless tobacco. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)

- Regular use of smokeless tobacco can cause oral cancers and dental problems so it should not be used as a substitute for smoking cigarettes. Many people who use smokeless tobacco think it's safer than smoking. However, smokeless tobacco carries many health risks.
- Gingival recession and decay of exposed root surfaces frequently occur adjacent to the site of placement of the smokeless tobacco (Fig. 10-5A).
- White patches or red sores on the buccal mucosa occur at the site of placement of the smokeless tobacco. (Figs. 10-5B and 10-6)
- Cancers of the oral cavity (i.e., the mouth, lip, and tongue) have been associated with the use of chewing tobacco as well as snuff. **Studies indicate that the tumors often arise at the site of placement of the tobacco.**
- Recent research shows the dangers of smokeless tobacco might play a role in cancer of the pancreas, heart disease, and stroke.



Figure 10-6. White Patch. A white patch is evident on the buccal mucosa at the site of placement of smokeless tobacco. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)

Bidis and Hookah

- **Bidis** (small, often flavored, hand-rolled cigarettes) increase the risk of coronary heart disease and cancer of the mouth, pharynx and larynx, lung, esophagus, stomach, and liver.
- Smoking a **hookah** (a kind of tobacco water pipe) results in the same carbon monoxide level as smoking a pack of cigarettes a day.

HEALTH RISKS OF SECONDHAND SMOKE

Environmental tobacco smoke (ETS), also known as **secondhand smoke** or **passive smoking**, occurs when people inhale the smoke of others. ETS contains the same harmful chemicals that smokers inhale and presents a substantial health risk to non-smokers. Research has established the significant health dangers of involuntary exposure to tobacco smoke.

Adult Non-Smokers

- ETS exposure is linked to an increase in certain types of cancer among non-smokers. There are clear associations between ETS and cancers of the nasal sinus, cervix, breast, and bladder.

- Those exposed to secondhand smoke are at increased risk for cardiopulmonary problems, including decreased lung function, chronic cough, and ischemic heart disease. As many as 60,000 annual heart disease deaths in adult nonsmokers result from secondhand smoke in the United States (Fig. 10-7). Approximately 3000 lung cancer deaths per year among adult nonsmokers in the United States are linked to secondhand smoke. In Canada, more than 300 non-smokers die of lung cancer and at least 700 non-smokers die of coronary heart disease caused by exposure to second-hand smoke each year.[6]

Children and Infants

- Exposed children are more likely to have reduced lung capacity, serious lower respiratory tract infections, severe asthma, and middle ear infections.
- The risk for sudden infant death syndrome is higher among babies exposed to smoke and babies born to women exposed to secondhand smoke are more likely to have low birth weight and to be premature.
- There is a clear link between childhood tooth decay and parental smoking.[10]

Companion Animals

- Cigarette smoke can cause cancer in dogs, cats, and other pets. Pets don't just inhale smoke; the smoke particles get trapped in their fur and are ingested when they groom themselves.
- Dogs living in smoking households have a 60% greater risk of lung cancer, and longer nosed dogs are twice as likely to develop nasal cancer.
- Cats living in smoking households are three times more likely to develop lymphoma, the most common type of feline cancer.
- In addition, secondhand smoke has been associated with lung cancer in pet birds!

DISEASE STATES	ESTIMATED ANNUAL DEATHS
Lung Cancer	3,423-8,866 deaths
Cardiac-Related Illnesses	22,700-69,600 deaths
Sudden Infant Death Syndrome	430 deaths
Low Birth Weight Infant or Pre-Term Deliveries	24,300-71,900 cases
Childhood Asthma (new and exacerbations)	202,300 episodes
Childhood Lower Respiratory Illnesses	150,000-300,000 cases
Childhood Middle Ear Infections	789,700 cases

Figure 10-7. Risks Associated with Secondhand Smoke. U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. (Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006, 1.)

SECTION 2 HARMFUL PROPERTIES OF TOBACCO

CHEMICAL COMPONENTS

All tobacco products emit over 4000 chemicals, 43 of which have been identified as carcinogens (Fig. 10-8).[10] A **carcinogen** is a chemical or other substance that causes cancer.

- The act of burning a cigarette creates the majority of these chemical compounds, many of which are toxic and/or carcinogenic.[11] For example, formaldehyde, benzene, arsenic, ammonia, carbon monoxide, nitrogen oxides, hydrogen cyanide, and ammonia are all present in cigarette smoke.
- Ironically, low-tar cigarettes often produce higher levels of chemicals like carbon monoxide than regular cigarettes. Also, when smoking a low-tar cigarette, the smoker may inhale more deeply and more often to get the usual amount of nicotine. This is very important because even though nicotine is not a carcinogen, it is the chemical that causes addiction.



Figure 10-8. Chemicals in Cigarette Smoke. Source: U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. (Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006, 29–45, table 2.1.)

ADDICTIVE PROPERTIES OF NICOTINE

Addiction is a chronic dependence on a substance—such as smoking—despite adverse consequences. The dependence on the substance makes stopping very difficult. All tobacco products contain nicotine. Nicotine is found naturally in tobacco; however it is classified as an additive, since all the tobacco companies increase the amount of nicotine in all tobacco products to ensure continual use.[11]

- Nicotine is powerful, fast acting, and one of the most addictive substances known to human kind (Fig.10-9).
- Even though nicotine is not a carcinogen, it is the chemical that causes addiction.
- On a milligram per milligram basis, it is ten times more addictive than heroin or cocaine and six to eight times more addictive than alcohol.
- It is therefore imperative that dental hygienists encourage each and every patient who uses tobacco to follow sound advice when making a quit attempt and consider incorporating one of the cessation medications as part of the quit plan.

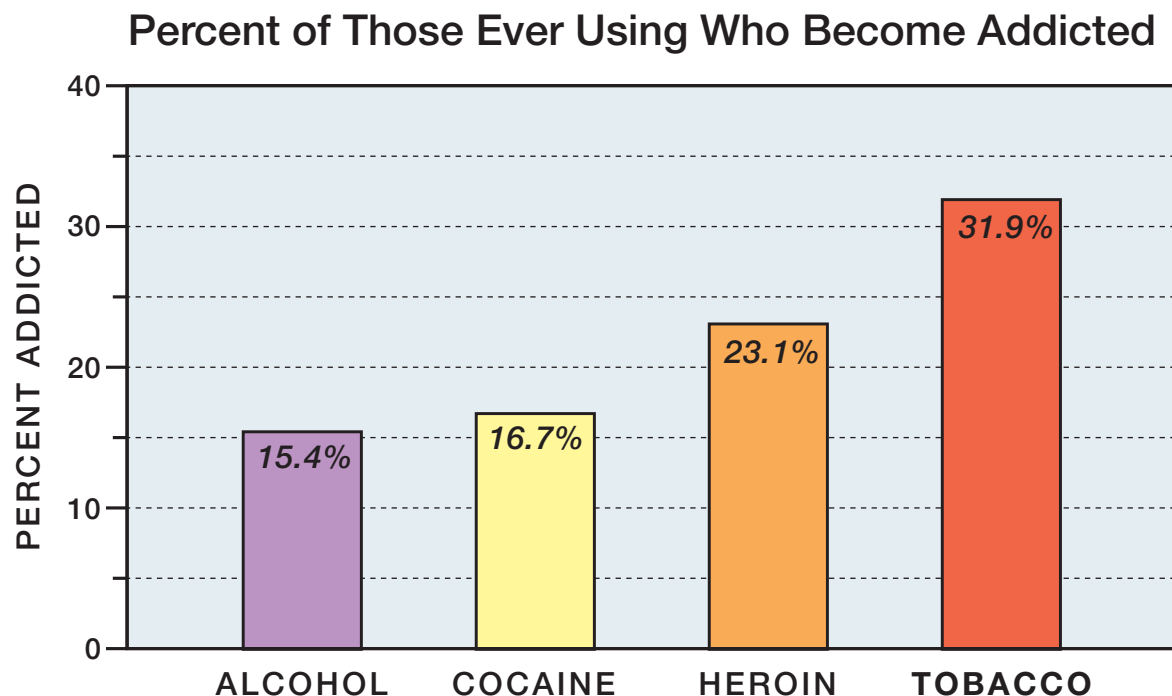


Figure 10-9. Percent of Individuals who Become Addicted. Source: National Institute of Mental Health (NIMH) National Co-morbidity Survey 1994.

SMOKING RATES

It is a testament to the power of tobacco addiction that 20.8% of U.S. adults (about 45 million) and 21% of Canadians (about 5.3 million people) are current smokers.[12]

- Smoking rates in the United States and Canada have decreased since the 1964 surgeon general's report linked lung cancer and cigarette use. At that time, an estimated 42% of the American population was smokers. However, the current prevalence has not significantly decreased since 2004, demonstrating a stall in the previous 7-year decline (Fig. 10-10). [13]
- Unfortunately, the incidence is highest in the most vulnerable populations. Those living below poverty line are 40% more likely to smoke than those living above the poverty line.[14]

- The most powerless populations—the young, indigent, depressed, uninsured, less educated, blue-collar, and minorities—have the highest percentages of smokers in the United States and in Canada.
- Tragically, tobacco use must be considered a pediatric disease, with more than 2000 children and adolescents becoming regular users of tobacco each day in the United States alone. Half of all smokers start prior to the age of 14 and 90% begin by age 19. Only 10% of smokers initiate the habit as adults.[14]

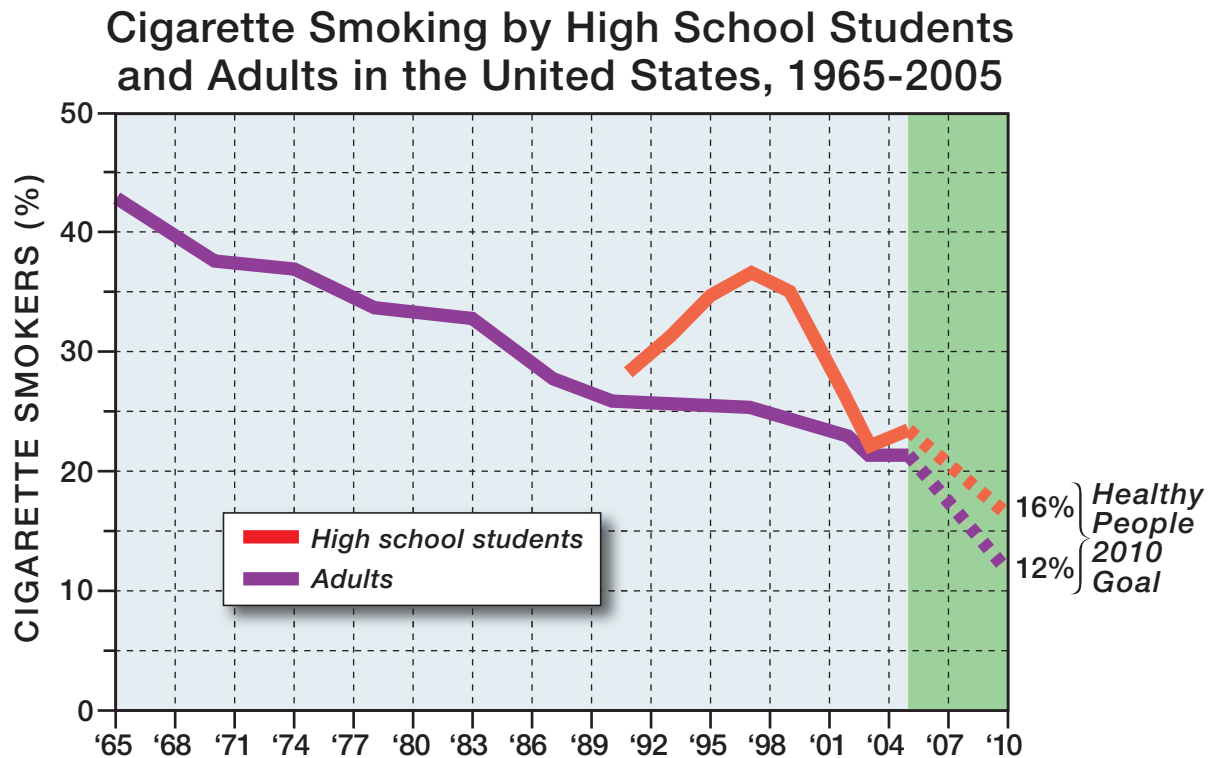


Figure 10-10. Current Trends in Smoking Rates. Source: National Health Interview Surveys: 1965, 1970, 1974, 1978, 1980, 1983, 1985, 1987, 1990, 1993, 1995, 1997, 1999, 2001–2006.

SECTION 3 WHY SHOULD DENTAL HEALTH CARE PROVIDERS INTERVENE?

As one of the most accessible health care professionals, dental hygienists are in an ideal position to provide tobacco cessation services. The more intensive the intervention the higher the quit rates, but even minimal tobacco interventions—less than three minutes—increase the proportion of tobacco users who quit and have a considerable public health impact. **The Clinical Practice Guideline for Treating Tobacco Use and Dependence**, published by the United States Department of Health and Human Services, **recommends that all clinicians provide every tobacco user at every encounter with at least minimal tobacco cessation intervention.** The Clinical Practice Guideline may be downloaded at http://www.surgeongeneral.gov/tobacco/treating_tobacco_use.pdf

All dental health care professionals should be concerned with their patients' use of tobacco products. Smoking may be responsible for more than half of the cases of periodontal disease among adults in this country.[9] Tobacco use is therefore one of the most significant risk factors in the development and progression and successful treatment of periodontitis. Current smokers are about four times more likely than people who have never smoked to have advanced periodontal disease.[9] Even in adult smokers with generally high oral hygiene standards and regular dental care habits, smoking accelerates periodontal disease.

ONE-ON-ONE EDUCATION IS NEEDED

Despite major efforts to educate the public on the dangers of smoking over the past 40 years, the general populace seriously underestimates the magnitude of the harm that tobacco causes. Perhaps even more alarming is that major knowledge gaps exist in what smokers themselves believe to be true about the risks associated with smoking compared with the actual realities of tobacco-related disease and death.

- While many smokers are aware that smoking can lead to serious health problems including lung cancer, many underestimate the risk of getting the disease from smoking.
- As many as a third of smokers think that certain activities such as exercise and taking vitamins “undo” most of the detrimental effects of smoking.
- Experts believe these misperceptions may prevent smokers from trying to quit and successfully utilizing proven smoking cessation treatments.
- A century from now, when historians reflect on the account of tobacco in the twentieth century, it will surely be looked on as one of the most intriguing and tragic developments of the period.

TOBACCO CESSATION COUNSELING WORKS

The effectiveness of even brief tobacco dependence counseling has been well established and is also extremely cost-effective relative to other medical and disease-prevention interventions.

- Smokers cite a health professional's advice to quit as an important motivator for attempting to stop smoking.
- With effective education, counseling and support—rather than condemnations and warnings about dangers of smoking—dental health care providers can provide an invaluable service.
- Helping someone overcome a tobacco addiction may be the most broad-reaching health care intervention a dental hygienist can achieve.

IT'S NEVER TOO LATE TO QUIT

For patients who use tobacco, one of the most important messages is that it is never too late to quit.

- Even for long-term smokers, quitting smoking carries major and immediate health benefits for men and women of all ages. (Fig. 10-11). Benefits apply to healthy smokers and to smokers already suffering from smoking-related disease.
- Smoking cessation represents the single most important step that smokers can take to enhance the length and quality of their lives.
- Smokers who quit—even after age 63—start repairing their bodies right away. After only two weeks, lung function increases by up to 30% in most persons.

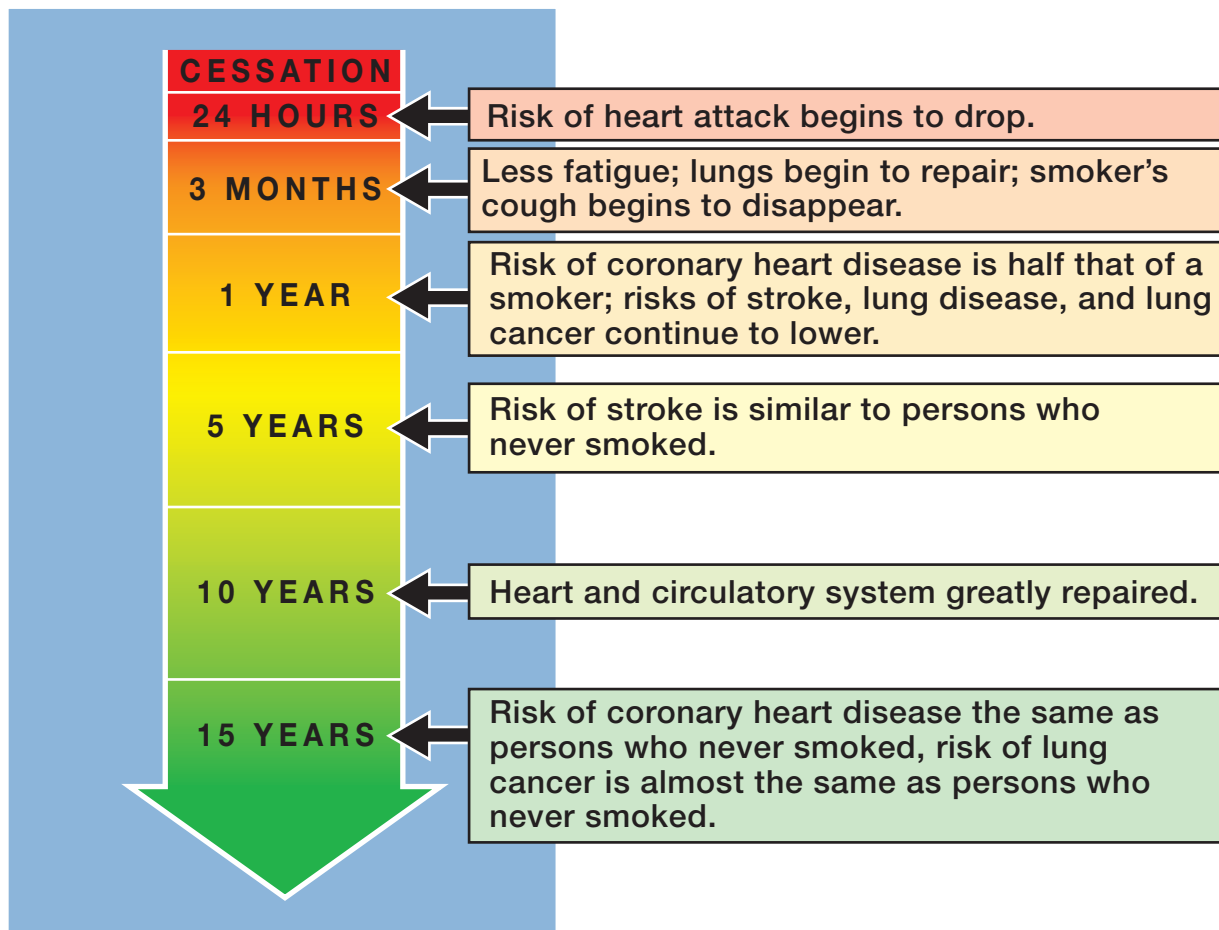


Figure 10-11. Potential Health Benefits of Quitting. Source: The health consequences of smoking; a report of the Surgeon General. (Atlanta, GA: Dept. of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; Washington, D.C.)

SECTION 4 GUIDELINES FOR TOBACCO CESSATION COUNSELING

THE CLINICAL PRACTICE GUIDELINE

The Clinical Practice Guideline for Treating Tobacco Use and Dependence published by the United States Department of Health and Human Services is considered the benchmark for cessation techniques and treatment delivery strategies. The Clinical Practice Guideline may be downloaded at http://www.surgeongeneral.gov/tobacco/treating_tobacco_use.pdf. The updated 2008 Guideline reflects the scientific cessation literature published from 1975 to 2007. The guideline contains strategies and recommendations designed to assist clinicians in delivering and supporting effective treatments for tobacco use and dependence. Several key recommendations of the updated guideline are as follows:

- Tobacco dependence is a chronic condition that often requires repeated intervention. However, effective treatments exist that can produce long-term or even permanent abstinence.
- Because effective tobacco dependence treatments are available, every patient who uses tobacco should be offered at least one of these treatments:
 - Patients *willing* to try to quit tobacco use should be provided with treatments identified as effective in this guideline.
 - Patients *unwilling* to try to quit tobacco use should be provided with a brief intervention designed to increase their motivation to quit.
- It is essential that clinicians consistently identify, document, and counsel every tobacco user seen in a health care setting.

The Five A's Model

The Clinical Practice Guideline for Treating Tobacco Use and Dependence recommends the Five A's (Ask, Advise, Assess, Assist and Arrange) as the key components of comprehensive tobacco cessation counseling (Fig. 10-12).

ASK	Every patient about tobacco use.
ADVISE	Every tobacco user to quit.
ASSESS	Determine willingness to quit. Provide information on quitlines.
ASSIST	Refer to quitlines.
ARRANGE	Refer to quitlines.

Figure 10-12. The Five A's Model. The five steps of the Clinical Practice Guideline's model for tobacco use cessation.

TABLE 10-1. Strategies for Implementing the Five “A’s”

Ask	• Implement an office-wide system that ensures that for every patient at every dental appointment, tobacco use status is queried and documented • Use an identification system that indicates tobacco use status (current, former, never) and level of use (number of cigarettes smoked/chew amount per day) on patient’s chart • Use an open-ended question: <i>When is the last time you tried a tobacco product?</i> • Not asking about tobacco use implies that quitting is not important!
Advise	• Incorporate a consistent, clear, strong and personalized advice dialogue when urging every tobacco user to quit: • Clear: <i>It is important for you to quit smoking or using chewing tobacco now and I can help you.</i> • Strong: <i>As your clinician, I know that quitting may be the hardest thing you will ever do but it is definitely the most important thing you can do for your health.</i> • Personalized: <i>Continuing to smoke may worsen these oral findings.</i> • Express concern for the patient’s health and a commitment to aid with quitting
Assess	• Determine the patient’s willingness to quit and knowledge of quit resources by asking open-ended questions using a nonjudgmental approach: <i>How do you feel about quitting at this point in your life? Are you aware that there are tools to make the process a bit easier?</i>
Assist	• Encourage patient to set a quit date—preferably within 1 to 2 weeks of the dental appointment • Discuss challenges such as withdrawal symptoms, triggers, vulnerable situations • Reassure the patient that ambivalence, fear, reluctance, etc. are all normal but should not deter the quit attempt • Supply information on cessation programs, websites, quitlines, medications, etc. • Provide appropriate cessation referrals for treatment • Review the options and help the patient determine what would work best for him/her
Arrange	• Follow-up contact should begin soon after quit date, with focus on preventing relapse • Schedule further follow-up contacts as indicated • Consider referral for more intensive treatment as indicated • If tobacco use has occurred, review circumstances and discuss how to avoid another slip in similar circumstances

THE ADHA'S SMOKING CESSATION INITIATIVE

The American Dental Hygienists' Association (ADHA) has developed a condensed “user-friendly” model for the dental hygienist who does not have the time, inclination, or expertise to provide the more comprehensive tobacco cessation counseling as recommended by the guideline (Fig. 10-13). **Ask. Advise. Refer. (AAR)** is the ADHA's national Smoking Cessation Initiative (SCI) designed to promote cessation intervention by dental hygienists. The “Ask. Advise. Refer.” approach integrates the “Five A's” into an abbreviated intervention that remains consistent with recommended guidelines.

As part of the “Ask. Advise. Refer.” campaign, dental hygienists refer their patients who use tobacco to quitlines as well as to web-based and local cessation programs. Dental hygienists can utilize a variety of resources to help their patients quit smoking. The “Ask. Advise. Refer.” program is designed as a program that dental hygienists can easily integrate into their tobacco cessation efforts. See <http://www.askadviserefer.org>.



Figure 10-13. The “Ask. Advise. Refer.” Model. The “Ask. Advise. Refer.” Program—the ADHA's smoking cessation initiative—is an easy to use three-step tobacco use cessation program.

QUITLINES

Quitlines are toll-free telephone centers staffed by trained smoking cessation experts. It takes as little as 30 seconds to refer a patient to a quitline or website (Fig. 10-14). **A list of quitlines is provided in the ready reference section of this module.**

- Evidence suggests quitline use more than triples the success in quitting.
- By referring their patients to a quitline, dental hygienists are incorporating all Five A's (Ask, Advise, Assess, Assist, Arrange) of the Smoking Cessation Clinical Practice Guidelines.
- **Quitlines have proven to be one of the more effective methods of promoting smoking cessation.** Canada and the United States have each established publicly financed quitline services.
- Quitline services have the potential to reach large numbers of tobacco users including low income, rural, elderly, uninsured and racial/ethnic populations who may not otherwise have access to cessation programs.
- The main reason quitlines have proliferated is that there is strong evidence of their efficacy.

- Dental hygienists are natural partners for quitlines and can play a major role in increasing their utilization.
- Dental health care providers who ask all patients whether they use tobacco, advise quitting, and refer to quitlines for comprehensive cessation counseling can have a profound impact on patient health (Fig. 10-15).



Figure 10-14. U.S. Dept. of Health and Human Services Quitline. The United States Department of Health and Human Services has recognized the overwhelming success of Quitlines and is dedicated to providing every citizen in every state with this important tool. (Card courtesy of the UCSF, Smoking Leadership Center, San Francisco, CA.)

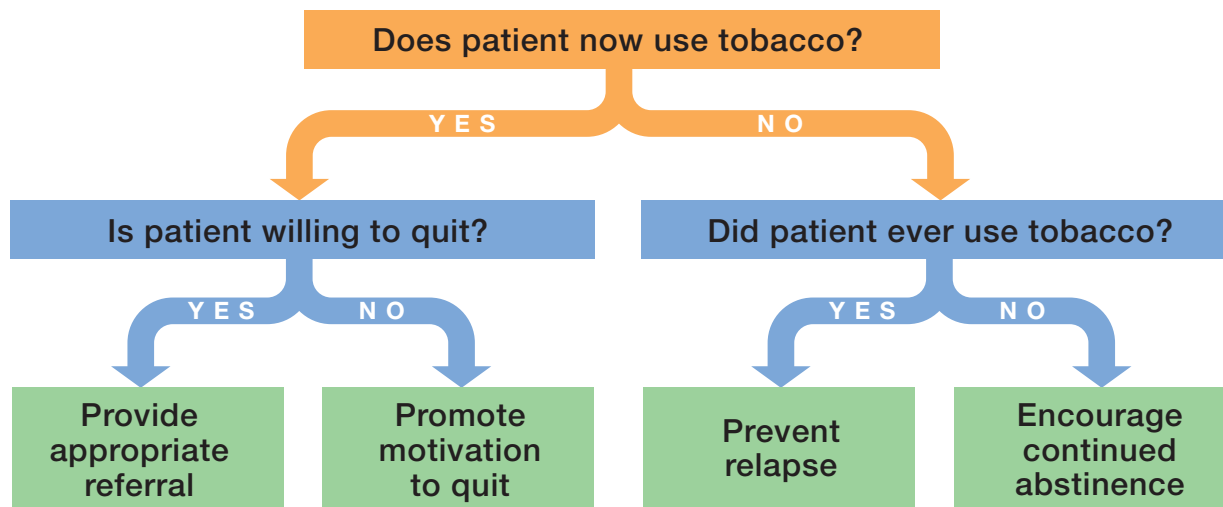


Figure 10-15. Systematic Approach to Tobacco Cessation Counseling. Shown here is a user-friendly decision tree for providing tobacco cessation counseling.

TABLE 10-2. Common Misconceptions . . . Counter Myth With Facts

Myth	Fact
Tobacco users should not be forced into quitting; professionals should not “nag” them	• The majority of tobacco users wish to quit but are unable to do so without assistance— • Cessation assistance should be provided at every encounter
Someone already sick as a result from tobacco use should not be made to feel guilty	• Tobacco addiction is not a moral issue; it is a medical condition similar to any chronic condition such as diabetes. Helping someone maintain blood sugar control decreases risk and enhances quality of life—just as helping someone quit tobacco use!
There is too little time to provide smoking cessation intervention	• ADHA’s “Ask. Advise. Refer.” model takes less than three minutes to provide a meaningful intervention
Dental hygienists have not been educated about how to help patients quit smoking	• Most health care professionals have not been educated about how to intervene but there are now many resources available to RDHs
Most tobacco users relapse	• The more quit attempts the more chance of permanent success • Educate about the importance of receiving support and follow-up care
Tobacco users have to want to quit in order to quit	• It is much more important to learn how to quit than to want to quit • Educate patients that it is possible to learn how to quit even if the desire to quit is not there! • Quitting is ending a relationship and it is at least a 3-month process for most! • Utilizing cessation tools and methods increases success rates—the encouragement and tools provided by the dental hygienist are of utmost importance!

WITHDRAWAL SYMPTOMS

Tobacco use is a complex behavior involving the interplay of physiologic, psychological, and habitual factors that continuously reinforce one another to promote dependence (Fig. 10-16). Two hallmarks of dependency include smoking within 30 minutes of arising from sleep and experiencing withdrawal symptoms if regular pattern of use is disrupted. The cardinal **withdrawal symptoms** include a variety of unpleasant symptoms such as craving for nicotine, irritability, anger, anxiety, fatigue, depressed mood, difficulty concentrating, restlessness, and sleep disturbance.

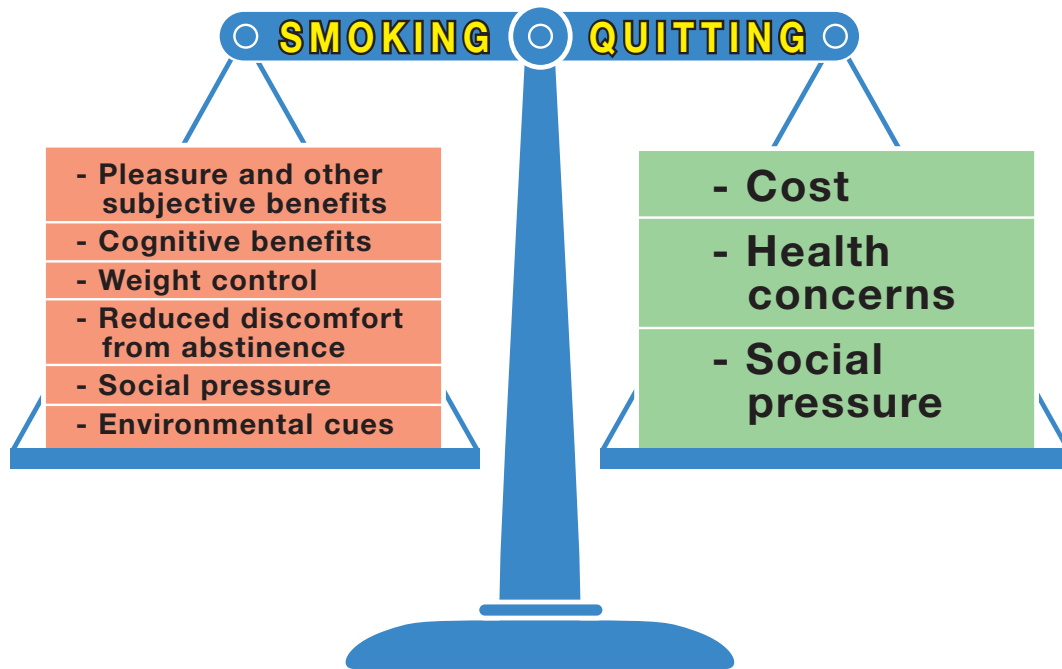


Figure 10-16. Addiction vs. Free Will. Graphic representation of the factors that reinforce continued smoking versus factors that motivate smokers to quit.

QUIT RATES

Although 70% of smokers say they are “interested” in quitting, only 10% to 20% plan to quit in the next month. About 45% of smokers will try to quit in a given year.[15]

- The majority of smokers try to quit on their own. For most, relapse occurs quickly. Only half succeed for two days and only a third last one week. Most relapses occur in the first few months. Overall, self-quitters have a success rate of 4% to 6%.[16]
- Most smokers make three to eight quit attempts before finally succeeding.
- Half of all smokers eventually quit. In the United States, there are now as many former smokers as current smokers.

Implications of Quit Rates

- An important implication of the quit rate statistics is that dental health care providers need to understand the importance of helping the tobacco user through not just one quit attempt but rather through several attempts before a final successful one.
- Another implication is that dental professionals need to prompt and re-prompt tobacco users to make efforts to quit. Offering consistent smoking cessation counseling cannot only help smokers stop but can also motivate smokers to *try* to quit.

SECTION 5 SMOKING CESSATION PRODUCTS

No matter the level of addiction, all patients attempting to quit should be encouraged to at least try one or more of the effective pharmacotherapies (Fig. 10-17).

Pharmacotherapy is the treatment of a medical condition using one or more medications. The goal of cessation pharmacotherapy is to alleviate or diminish the symptoms of withdrawal. The more physically comfortable the patient is, the more likely the smoker will make a serious quit attempt and succeed in permanently quitting.

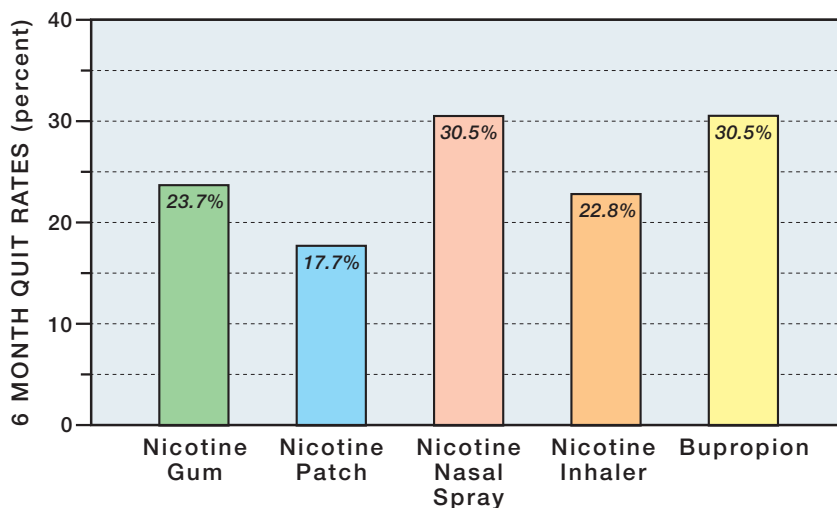


Figure 10-17. Six-Month Quit Rates. Data adapted from: *Treating Tobacco Use and Dependence. Recommendations Regarding Specific Pharmacotherapies: First Line Medications.* (U.S. Department of Health and Human Services, Public Health Service, June 2000: 72–91.)

NICOTINE REPLACEMENT THERAPY

Nicotine replacement therapy (NRT) involves nicotine-containing medications used for smoking cessation.

- Almost all researchers agree that nicotine is not a carcinogen and there is growing consensus that nicotine derived from medications does not promote cardiovascular disease.
- All of the NRT formulations are associated with slower onset and much lower nicotine levels than are cigarettes and of course they do not produce carbon monoxide, toxins, and carcinogens.
- The safety and abuse records of NRT have been excellent. The choice of NRT should be individualized—based on patient preference, past experience, smoking dependence, and habits.

Label Warning and Contraindications for NRT Products

The labeling on NRT products still instructs tobacco users to consult their physician if there is a history of heart disease, ulcers, or hypertension or with pregnancy or breast-feeding.

- The only medical contraindications listed in the guideline are:
 - Immediate myocardial infarction (<2 weeks)
 - Serious arrhythmia

- Serious or worsening angina pectoris
- Accelerated hypertension
- There is a documented lack of an association between NRT and acute cardiovascular events even in patients who continue to smoke while on the patch.
- The guideline recommends use of NRT in pregnancy if other therapies have failed. Clearly, the fetus is exposed to significantly less nicotine with NRT than with smoking and most importantly is not exposed to carbon monoxide, carcinogens, and toxins from cigarettes.
- The labels also recommend not using the products in combination. However, it has been found that using these products in combination increases success rates with no increase in adverse side effects.
- Another label warning that has been shown not to be a concern is about smoking while using the patch. Evidence shows that use of NRT prior to quitting may be effective in increasing abstinence rates

Nicotine Replacement Therapy Products

- There are five nicotine replacement therapy (NRT) products on the market in both Canada and the United States, including the nicotine gum, nicotine lozenge, nicotine patch, nicotine inhaler, and nicotine nasal spray.
- Nicotine gum first appeared in 1984 and the nicotine patch was made available in 1994. Between 1995 and 1996 both became available without prescription. This resulted in the largest increase in smoking cessation since the 1964 Surgeon General's report on smoking.
- Two NRT products are still only attainable through prescription. The Nicotrol Nasal Spray appeared in 1996 and the Nicotrol Inhaler in 1998.
- The final nonprescription NRT product to materialize is the nicotine lozenge, which has been on the market since 2002.
- Light smoking has become more common, perhaps due to smoking restrictions and increases in the price and taxation of tobacco products.
- Many light smokers have a strong dependence even though they smoke relatively few cigarettes. They are less likely to receive treatment than are heavier smokers but anecdotal evidence shows an increase in success rates with the use of NRT.
- At the other end of the spectrum, higher-than-recommended doses may be indicated in tobacco users with severe addiction. Failure to respond to NRT products may reflect inadequate dosage, incorrect usage, or both.

NON-NICOTINE MEDICATIONS

There are two non-nicotine medications specifically developed to help adults quit smoking: bupropion and varenicline.

Bupropion (Zyban)

Bupropion (Zyban)—an atypical antidepressant—is a prescription medication designed to help smokers quit more easily than without the drug.

- It comes in a pill form and has been shown to double quit rates.
- Bupropion works by blocking the reuptake of dopamine and norepinephrine in the central nervous system, which modulates the dopamine reward pathway and reduces cravings for nicotine and symptoms of withdrawal.
- It is effective in those with no current or past depressive symptoms.
- Combining bupropion with NRT often increases success rates over bupropion used alone.

Varenicline (Chantix)

The most recent non-nicotine medication varenicline (Chantix) was approved in 2006.

- Varenicline contains no nicotine, but it targets the same receptors that nicotine does. Varenicline is believed to block nicotine from these receptors.
- The drug's efficacy is believed to be the result of a sustained, low-level agonist activity at the receptor site, combined with competitive blockade of nicotine binding. The partial agonist activity modestly stimulates receptors, leading to increased dopamine levels that reduce nicotine withdrawal symptoms. By blocking the binding of nicotine to receptors in the central nervous system, varenicline inhibits the surge of dopamine release that occurs immediately (7 to 10 seconds) following each inhalation of tobacco smoke. This effect may help prevent relapse by reducing or even eliminating the pleasure linked with smoking.
- Evidence suggests that using varenicline can increase successful quitting three times more than when compared with placebo.

TABLE 10-3. Pharmacotherapy Treatment Options

	Time Period	Dose	Pros	Cons
Patch	At least 8 weeks, preferably 12 weeks	• 21 mg for 1 pack/day • 14 mg for 1/2 pack/day • 7 mg for 5 cigarettes per day • Over 1 pack/day: double up on patches or combine with another product	• Very easy to use • Automatically provides the right dose for a 24-hour period • Helps with early morning cravings	• May cause vivid dreams at night • Not orally gratifying • Small possibility of skin reaction to patch
Gum	Up to 12 weeks, then PRN *	• 4 mg for 1 pack/day • 2 mg for less than 1 pack/day • May chew 1 piece for every cigarette smoked	• Easy to regulate dose • Can help prevent overeating • Can provide help at difficult moments	• Tricky to use with dentures • Nothing to drink for 20 minutes prior to use • Must use chew and park technique
Lozenge	Up to 12 weeks, then PRN *	• 4 mg for 1 pack/day • 2 mg for less than 1 pack/day • May use 1 lozenge every 1 to 2 hours	• Easy to adjust dosage • Can help prevent overeating • Can provide help at difficult moments	• Nothing to drink for 20 minutes prior to use • Must be allowed to dissolve slowly
Nasal Spray	Up to 12 weeks, then PRN *	• Dose once or twice an hour • Not more than 48 sprays in 24 hours	• Gives fast relief • Easy to adjust dosage	• May cause nasal irritation
Inhaler	Up to 12 weeks, then PRN *	• 6 to 12 cartridges per day	• Keeps hands and mouth busy • Easy to regulate dose • Could help prevent overeating	• Feels like a cigarette • Very conspicuous method that calls attention to quit attempt
Zyban	12 weeks; start taking 1 to 2 weeks prior to quitting	• One 150-mg tablet every morning for 3 days; then 150-mg tablet twice a day at least 8 hours apart on day 4 and thereafter	• Easy to use • Decreases urge to smoke • May suppress appetite	• Possible sleep disruption • Can cause xerostomia • Contraindicated if seizure disorder, eating disorder, or taking monoamine oxidase inhibitors (MAOI)
Chantix	12 weeks; start taking 1 to 2 weeks prior to quitting	• One 0.5-mg tablet for 3 days; then one 0.5-mg tablet twice a day for 4 days; then one 1 mg tablet twice a day thereafter	• Easy to use • Decreases urge to smoke • No contraindications • Fewest compliance problems (patients will use it)	• Possible nausea, vomiting, headache, or insomnia

*PRN: use as needed.

SECTION 6 PEAK PROCEDURE: TOBACCO CESSATION

Procedure 10-1. Tobacco Cessation Counseling

1. Ask. Ask if your patient smokes or uses smokeless tobacco products.

- Many smokers want to quit and appreciate the encouragement of health professionals.

2. Advise. Advise the patient to quit.

The benefits of quitting include:

- Decreased risk of a heart attack, stroke, coronary heart disease; lung, oral, and pharyngeal cancer
- Improved sense of taste and smell
- Improved circulation and lung function
- Improved health of family members

- Smokers are more likely to quit if advised to do so by health professionals.
- The oral examination provides the perfect opportunity to discuss smoking cessation with your patient.
- Tobacco use is a major risk factor in oral and pharyngeal cancer, as well as, periodontal disease.
- Tobacco use is a risk factor for coronary heart disease, heart attack, and lung cancer. Secondhand smoke is unhealthy for family members.

3. Refer. Tell the patient that help is a free phone call away. Provide patient with quitline numbers.

A list of quitlines for the United States and Canada is located in the Ready References Section of this module.

- Evidence suggests quitline use can more than triple success in quitting.
- Quitlines provide an easy, fast, and effective way to help smokers quit.
- By simply identifying smokers, advising them to quit, and sending them to a free telephone service, clinicians can save thousands of lives.

SECTION 7 READY REFERENCES

Ready Reference 10-1. U.S. National Quitlines

The **U.S. Department of Health and Human Services** has a national quitline number: **1-800-QUIT-NOW** (1-800-784-8669). This toll free number is a single access link to the national network of tobacco cessation quitlines. Callers are automatically routed to a state-sponsored quitline, if one exists in their area. If there is no state-run quitline, the call is forwarded to the National Cancer Institute (NCI) quitline.

The **National Cancer Institute quitline** is toll free at **1-877-44U-QUIT** (1-877-448-7848). Information specialists are available to answer smoking-related questions in English or Spanish, Monday through Friday, 9:00 a.m. to 4:30 p.m. local time.

American Cancer Society quitline: 1-800-277-2345

American Lung Association quitline: 1-800-586-4872

Ready Reference 10-2. Canadian Quitlines by Province

New Brunswick	
Nova Scotia	
Ontario	1-877-513-5333
Manitoba	
Saskatchewan	
Alberta	1-866-332-2322
British Columbia	1-877-455-2233
Newfoundland and Labrador	1-800-363-5864
Northwest Territories	Call your public health unit
Nunavut	1-866-877-3845
Prince Edward Island	1-888-818-6300
Quebec	1-866-527-7383
Yukon	1-800-661-0408 (ext. 8393)

Ready Reference 10-3. Professional Internet Resources

<http://www.askadviserefer.org>

Website for the **American Dental Hygienists' Association's** smoking cessation initiative. The site has resources including links to fact sheets, presentations, and quitline resource lists.

<http://www.ada.org/prof/resources/topics/cancer.asp>

The **American Dental Association's** website provides oral cancer information for dental health care providers.

<http://www.cdc.gov/tobacco>

Website of the **Centers for Disease Control and Prevention** that features an online guide for clinicians, and helpful links.

<http://smokingcessationleadership.ucsf.edu>

The **Smoking Cessations Leadership Center (SCLC)** is a national program office of the Robert Wood Johnson Foundation that aims to increase smoking cessation rates and increase the number of health professionals who help smokers quit. Click on **Health Profession Resources** for a downloadable toolkit including print-and-post flyers for the dental office and downloadable PowerPoint slide presentations.

<http://www.smokefree.gov/usmap.html#>

On this website, click on a state to find smoking cessation resources in that state.

http://www.cancer.org/docroot/PED/PED_10_6.asp?sitearea5PED

American Cancer Society website with resources of health professionals. Smoking cessations resources include free brochures to keep smokers motivated, patient education materials, and a link to find a quitline in your area.

<http://www.ahrq.gov/path/tobacco.htm#Clinic> Agency for Health Care Research & Quality

http://www.chestnet.org/education/online/pccu/vol15/lessons13_14/lesson13.php

American College of Chest Physicians

<http://www.ahrq.gov/path/tobacco.htm#Clinic> Agency for Health Care Research & Quality

<http://www.attud.org/> Association for the Treatment of Tobacco Use and Dependence

<http://www.oralcancerfoundation.org/tobacco/index.htm> Oral Cancer Foundation

<http://www.athc.wisc.edu> Addressing Tobacco in Health Care

<http://tobaccofreenurses.org> Tobacco Free Nurses

<http://www.surgeongeneral.gov/tobacco/default.htm> United States Department of Health and Human Services

Smoking History

Patient _____ Date _____

1. At what age did you begin to smoke? _____
2. How many cigarettes do you smoke per day now? _____
Per day at your heaviest? _____
3. How many times have you tried to stop smoking? _____
☐ Never tried to stop
4. What is the longest period of time you have gone without smoking? _____
5. What forms of tobacco are you currently using? *(Please check all that apply.)*

☐ Cigarettes	☐ Chewing tobacco
☐ Pipes	☐ Snuff
☐ Cigars	☐ Other
6. Do your ☐ family members, ☐ friends, ☐ co-workers smoke? *(Please check all that apply. Circle if you live with any of these smokers.)*
7. What smoking cessation methods have you tried? *(Please check all that apply.)*

☐ None	☐ Self-help programs
☐ Cold turkey	☐ Gradual reduction
☐ Hypnosis	☐ Laser
☐ Acupuncture	☐ Other
8. Are you being ☐ encouraged, or ☐ discouraged to stop smoking by any of the following? *(Please check all that apply.)*

☐ Spouse or significant other	☐ Friend
☐ Child	☐ Co-worker
☐ Other family member	
9. Who do you turn to for support? *(Please check all that apply.)*

☐ Spouse or significant other	☐ Counselor
☐ Parent	☐ Health care provider
☐ Sibling	☐ Friend
☐ Other family member	☐ Co-worker
☐ Clergy/rabbi/priest	

Please rank the following on a scale of 1 (strongly disagree) to 5 (strongly agree):

I am ready to stop smoking at this time:	1 2 3 4 5
I am concerned about weight gain:	1 2 3 4 5
I am concerned about dealing with stress:	1 2 3 4 5

Patient Signature

Reviewed by

Figure 10-18. Smoking History in English.

Historia de Uso de Tabaco

Nombre _____ Fecha _____

1. ¿Ha que edad usted empezo ha fumar? _____
2. ¿Cuantos cigarillos usted fuma cada dia ahora? _____
¿Cual ha sido el máximo por día? _____
3. ¿Cuantas veces ha tratado de parar ha fumar? _____
☐ Nunca trató de parar
4. ¿Cual ha sido el período mas largo que ha dejado de fumar? _____
5. ¿Qué formas de tabaco utiliza usted? *(Por favor indice cuales aplican.)*
☐ Cigarillos ☐ Tabaco de masticar
☐ Pipas ☐ Snuff
☐ Cigarros ☐ Otro _____
6. ¿Su ☐ familia, ☐ amigos, ☐ compañeros de trabajo fuman? *(Indice cuales aplican. Si vive con algun fumador, ponga un círculo alrededor de cual aplica.)*
7. ¿Qué método de cesar de fumar ha tratado? *(Por favor indice cuales aplican.)*
☐ Ninguno ☐ Programa de ayuda personal
☐ Abrupto ☐ Rebajo gradual
☐ Hipnosis ☐ Láser
☐ Acupuntura ☐ Otro _____
8. ¿Quien le ☐ ayuda o ☐ disuade parar de fumar?
(Por favor indice cual aplica, y cuales los afecta.)
☐ Esposa/esposo ☐ Amigos
☐ Niños ☐ Compañeros de trabajo
☐ Otros de su familia
9. ¿Ha quien usted va para ayuda de dejar de fumar? *(Indice cuales aplican.)*
☐ Esposa/esposo ☐ Consejero
☐ Mis padres ☐ Agencia médica
☐ Hermanos ☐ Amigos
☐ Otros de su familia ☐ Compañeros de trabajo
☐ Ministro religioso

Indice rango en escala de 1 *(no esta de acuerdo)* ha 5 *(esta de acuerdo)*:

Estoy listo para parar de fumar ahora:	1	2	3	4	5
Estoy preocupado sobre aumentar de peso:	1	2	3	4	5
Estoy preocupado sobre estar estresado:	1	2	3	4	5

Firma del paciente

Revisado por

Figure 10-19. Smoking History in Spanish.

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SECTION 8 PATIENT EDUCATION RESOURCES

ADHA'S SMOKING CESSATION RESOURCES



The ADHA's Smoking Cessation Initiative (SCI) offers many free resources online at http://www.askadviserefer.org/for_your_patient.asp. Download the following resources from the website:

Quit Smoking Products for Clinicians—Order Form: The Quick Reference Guide for Clinicians and the English and Spanish versions of the You Can Quit Smoking Quit Plan are available from the Agency for Health Care Research and Quality.

You Can Quit Smoking Consumer Guide: The *You Can Quit Smoking Consumer Guide* is a booklet that will assist smokers in developing a quit plan offering five key steps, which embody the key recommendations from the *Clinical Practice Guideline: Treating Tobacco Use and Dependence*.

Personalized Quit Plans: These *You Can Quit Smoking* quit plans were developed by the U.S. Department of Health and Human Services and can be used to help prepare smokers for their first call to a quitline and to set a quit date. Quit plans are available for download in the following versions:

- English and English prenatal
- Spanish and Spanish prenatal
- Chinese
- Hmong
- Korean
- Laotian
- Vietnamese

PATIENT FORMS, HANDOUTS, AND WORKSHEETS

Personalized Benefits of Quitting Smoking

The following is a list of benefits one can receive after quitting which was developed by successful quitters. Check off those you like and add your own for increased motivation!

- ☐ Improved health
- ☐ Personal satisfaction
- ☐ Less tension
- ☐ Better image to children
- ☐ Improved scheduling of personal time
- ☐ Increased physical ability and improved stamina
- ☐ Improved hearing and vision, especially night vision
- ☐ Fewer dental problems-fresher breath
- ☐ Clothes, drapes, house, car smell better
- ☐ Reduced rates for car, health and life insurance
- ☐ Reduced litter from filters, ashes, paper
- ☐ Removal of film on windows and furniture

- ☐ Better appearance
- ☐ A sense of freedom
- ☐ More spending money
- ☐ Increased self-discipline
- ☐ Improved mental abilities
- ☐ Improved smell and taste
- ☐ Not smelling like smoke
- ☐ Two free hands
- ☐ Fewer colds
- ☐ Fewer burn holes in clothes
- ☐ Better social acceptance
- ☐ Better circulation

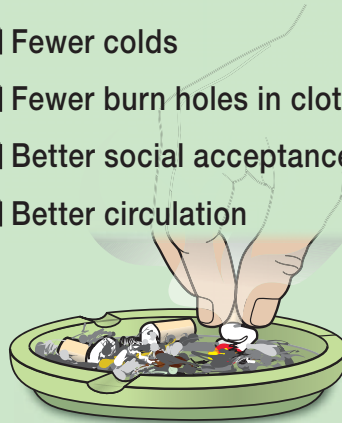


Figure 10-21. Personalized Benefits of Quitting Smoking Worksheet.

Plan of Action

TRIGGER SITUATIONS Time, place or activity with whom, mood, or reason	COPING STRATEGIES 1. Alternative behavior 2. Avoidance of situation
Coffee Break	1. Drink juice or dairy product instead 2. Skip coffee break
Watching television	1. Do something with your hands, such as knit or play cards 2. Sit in another room, go for a walk outside, exercise
Getting up in the morning	1. Get in the shower immediately or do calisthenics 2. Roll over and try to sleep an extra ten minutes
Alcohol-related activities	1. 2.
Special occasions	1. 2.
Argument with someone	1. 2.
Waiting for a bus	1. 2.
Talking on the telephone	1. 2.
Your own situations:	1. 2.
	1. 2.

Figure 10-22. Plan of Action Worksheet.

When the Craving Comes

- ☐ Take a few deep breaths and remember your determination to be free of the addiction.
- ☐ Think of your most important reason for wanting to stop and say it aloud in front of the mirror.
- ☐ Drink lots of water and juices.
- ☐ Do not start feeling sorry for yourself - feel for those who are still smoking. You were smart enough to join a smoking cessation program and stop smoking.
- ☐ Seek the company of nonsmokers. Immediately turn your attention to something else. Remember that even the most intense craving lasts only a few minutes - five at the most. The urge passes whether or not you smoke a cigarette.
- ☐ Take a break. Get up and walk around.
- ☐ Do something with your hands. Knit. Doodle. Play with a coin. Write a letter.
- ☐ Frequent places where you do not smoke rather than places where you used to smoke.
- ☐ Whistle, sing, brush your teeth, take a shower.
- ☐ Curb use of alcoholic and caffeinated beverages.
- ☐ Pop something low calorie into your mouth - gum or crisp vegetables such as carrots or celery.
- ☐ Concern yourself only with today - get through *today* without smoking.
- ☐ Be good to yourself in every possible way. Indulge and enjoy a special treat with the money you have saved by not buying cigarettes.
- ☐ Talk to yourself: "*Take it easy... Calm down.*"
- ☐ Practice relaxation techniques. Stretch, yawn, do deep knee bends, touch your toes, shrug your shoulders.
- ☐ Pretend you are smoking a cigarette. It is a very helpful breathing exercise. Breathe in and out slowly and deeply - sigh!
- ☐ Think of quitting as an act of love and a gift of love - *to yourself*.

Figure 10-23. When The Craving Comes Handout.

QUITTING TAKES HARD WORK AND A LOT OF EFFORT, BUT —



A PERSONALIZED QUIT PLAN FOR : _____

WANT TO QUIT?

- ▶ Nicotine is a powerful addiction.
- ▶ Quitting is hard, but don't give up.
- ▶ Many people try 2 or 3 times before they quit for good.
- ▶ Each time you try to quit, the more likely you will be to succeed.

GOOD REASONS FOR QUITTING:

- ▶ You will live longer and live healthier.
- ▶ The people you live with, especially your children, will be healthier.
- ▶ You will have more energy and breathe easier.
- ▶ You will lower your risk of heart attack, stroke, or cancer.

TIPS TO HELP YOU QUIT:

- ▶ Get rid of ALL cigarettes and ashtrays in your home, car, or workplace.
- ▶ Ask your family, friends, and coworkers for support.
- ▶ Stay in nonsmoking areas.
- ▶ Breathe in deeply when you feel the urge to smoke.
- ▶ Keep yourself busy.
- ▶ Reward yourself often.

QUIT AND SAVE YOURSELF MONEY:

- ▶ At \$3.00 per pack, if you smoke 1 pack per day, you will save \$1,100 each year and \$11,000 in 10 years.
- ▶ What else could you do with this money?



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(over)

FIVE KEYS FOR QUITTING YOUR QUIT PLAN



1. GET READY.

- ▶ Set a quit date and stick to it—not even a single puff!
- ▶ Think about past quit attempts. What worked and what did not?

1. YOUR QUIT DATE:



2. GET SUPPORT AND ENCOURAGEMENT.

- ▶ Tell your family, friends, and coworkers you are quitting.
- ▶ Talk to your doctor or other health care provider.
- ▶ Get group, individual, or telephone counseling.

2. WHO CAN HELP YOU:



3. LEARN NEW SKILLS AND BEHAVIORS.

- ▶ When you first try to quit, change your routine.
- ▶ Reduce stress.
- ▶ Distract yourself from urges to smoke.
- ▶ Plan something enjoyable to do every day.
- ▶ Drink a lot of water and other fluids.

3. SKILLS AND BEHAVIORS YOU CAN USE:



4. GET MEDICATION AND USE IT CORRECTLY.

- ▶ Talk with your health care provider about which medication will work best for you:
- ▶ Bupropion SR—available by prescription.
- ▶ Nicotine gum—available over-the-counter.
- ▶ Nicotine inhaler—available by prescription.
- ▶ Nicotine nasal spray—available by prescription.
- ▶ Nicotine patch—available over-the-counter.

4. YOUR MEDICATION PLAN:

Medications: _____

Instructions: _____



5. BE PREPARED FOR RELAPSE OR DIFFICULT SITUATIONS.

- ▶ Avoid alcohol.
- ▶ Be careful around other smokers.
- ▶ Improve your mood in ways other than smoking.
- ▶ Eat a healthy diet and stay active.

5. HOW WILL YOU PREPARE?

Quitting smoking is hard. Be prepared for challenges, especially in the first few weeks.

Follow-up plan: _____

Other information: _____

Referral: _____

Clinician

Date

Figure 10-24B. Page 2 of the Quit Plan in English.

VENCER EL TABACO ES DURO Y REQUIERE UN GRAN ESFUERZO, PERO —

Usted puede dejar de fumar

APOYO Y CONSEJOS DE SU PROFESIONAL DE SALUD



UN PLAN PERSONALIZADO PARA VENCER EL TABACO: _____

¿QUIERE DEJAR DE FUMAR?

- ▶ Nicotina es un vicio poderoso.
- ▶ Dejar el tabaco es duro, pero no se rinda.
- ▶ Muchas personas lo intentan 2 o 3 veces antes de vencerlo para siempre.
- ▶ Cada vez que usted intenta vencer el tabaco, es más probable que usted triunfe.

RAZONES BUENAS PARA DEJAR DE FUMAR:

- ▶ Usted vivirá más y vivirá más saludable.
- ▶ Las personas con que usted vive, especialmente sus hijos, serán más saludables.
- ▶ Usted tendrá más energía y respirará más fácil.
- ▶ Usted bajará su riesgo de ataque al corazón, de derrame cerebral, o de cáncer.

DATOS PARA AYUDARLE DEJAR DE FUMAR:

- ▶ Retire TODOS los cigarrillos y ceniceros de su casa, su auto, o de su trabajo.
- ▶ Pídale apoyo a su familia, amigos, y compañeros de trabajo.
- ▶ Permanezca en áreas de no fumar.
- ▶ Respire profundo cuando sienta la necesidad de fumar.
- ▶ Mantenga se ocupado.
- ▶ Recompénsese a menudo.

DEJE DE FUMAR Y AHORRE DINERO:

- ▶ A \$3.00 por cajetilla, si usted fuma una cajetilla por día, usted ahorraría \$1,100 cada año y \$11,000 en 10 años.
- ▶ ¿Qué más podría hacer usted con este dinero?



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(próxima página)

CINCO CLAVES PARA DEJAR DE FUMAR**SU PLAN PARA VENCER EL TABACO****1. PREPARESE.**

- ▶ Establezca una fecha y no la cambie - ni un solo soplo!
- ▶ Piense en sus previos intentos. ¿Qué trabajó y qué no?

**2. OBTenga APOYO Y ALIENTO.**

- ▶ Dígale a su familia, amigos y compañeros de trabajo que usted va dejar de fumar.
- ▶ Hable con su doctor u otro profesional de salud.
- ▶ Obtenga apoyo por medio de grupos, individuos o el teléfono.

**3. APRENDA NUEVA HABILIDADES Y CONDUCTAS.**

- ▶ Cuando comience a dejar de fumar, cambie su rutina.
- ▶ Reduzca el stress.
- ▶ Distráigase de los impulsos de fumar.
- ▶ Planee hacer algo agradable todos los días.
- ▶ Beba mucha agua y otros líquidos.

**4. OBTenga MEDICAMENTOS Y USELOS CORRECTAMENTE.**

- ▶ Hable con su profesional de salud acerca de cuál medicamento sería mejor para usted:
- ▶ Bupropion SR—disponible por receta médica.
- ▶ Chicle de nicotina—disponible sin receta médica.
- ▶ Inhalador de nicotina—disponible por receta médica.
- ▶ Rocío nasal de nicotina—disponible por receta médica.
- ▶ Parche de nicotina—disponible sin receta médica.

**5. ESTE PREPARADO PARA RECAER O PARA SITUACIONES DIFICILES.**

- ▶ Evite el alcohol.
- ▶ Tenga cuidado alrededor de otros fumadores.
- ▶ Mejore su estado de ánimo en maneras que no incluya fumar.
- ▶ Coma una dieta saludable y permanezca activo.

1. SU FECHA DE VENCER EL HABITO:

2. QUIEN LO PUEDE AYUDAR:

3. HABILIDADES Y CONDUCTAS QUE USTED PUEDE UTILIZAR:

4. SU PLAN DE MEDICAMENTOS:

Medicamentos : _____

Instrucciones : _____

5. ¿COMO SE VA PREPARAR?:

Dejar de fumar es difícil. Prepárese al desafío, especialmente en las primeras semanas.

Plan a seguir: _____

Otra información: _____

Referencia: _____

Clínico

Fecha

Figure 10-25B. Page 2 of the Quit Plan in Spanish.

WEBSITES TO HELP YOU QUIT

<http://www.cdc.gov/tobacco/how2quit.htm>

Website of the Centers for Disease Control and Prevention that focuses on how to quit smoking. Features an online consumer guide, quit tips, guide for clinicians, and helpful links.

<http://www.nlm.nih.gov/medlineplus/smoking.html>

MEDLINEplus website provides accurate information regarding all aspects of the effects of tobacco on health, ways to avoid tobacco, and smoking cessation.

http://www.quitnet.corm/qn_main.html

The Join Together website sponsored by the Boston University School of Public Health, provides resources for smokers to quit smoking. Site includes interactive tools, e-mail reminders, chat rooms, nicotine news, and other resources to help people quit smoking.

http://www.nmh.org/classes/wellness_institute.html

The website of the Northwestern Memorial Wellness Institute offers smoking cessation services.

http://www.cancer.org/docroot/PED/content/PED_10_13X_Guide_for_Quitting_Smoking.asp

American Cancer Society

<http://www.lungusa.org/site/pp.asp?c5dvLUK9O0E&b522542>

American Lung Association

www.quitnet.com

Quit Net

<http://www.cdc.gov/tobacco/>

Centers for Disease Control and Prevention

<http://www.ahrq.gov/consumer/tobacco/>

United States Department of Health and Human Services

<http://www.niddk.nih.gov/health/nutrit/pubs/quitsmok/index.htm>

The Weight-Control Information Network, an informational service of the National Institute of Diabetes, Digestive, and Kidney Disease (NIDDK) provides helpful information for people who are worried about gaining weight when they stop smoking. This site will alleviate fears about gaining weight.

SECTION 9 THE HUMAN ELEMENT

Box 10-1. Through the Eyes of the Clinician

Mr. R. is a 60-year-old male who started smoking at age 14. By 17, he was smoking daily—as much as one to three packs a day. Mr. R.’s current daily consumption is two packs a day. Typically, Mr. R. smoked immediately on waking and if he woke in the middle of the night. This information indicated to me that Mr. R. had a strong physical addiction.

Mr. R. told me that a year ago he met a wonderful woman, Helen, and that they were going to be married in 7 months. He was very defensive about his smoking and said that Helen really wanted him to quit before their wedding. Mr. R. confided that he finds the pressure from his fiancée about quitting decidedly unhelpful! He felt that he did not have the “willpower” to quit. He also expressed concern that since he had been smoking for so long it was probably pointless to quit at his age.

I encouraged Mr. R. to just listen to the cessation options available to him. I assured him it wasn’t nearly as necessary **to want to quit** as it was **to decide to quit** and I could help by offering him tools to assist in the quitting process. I spoke to Mr. R. about nicotine addiction and explained through no fault of his own he most likely had a genetic predisposition to nicotine addiction. I told him that even though taking control of a nicotine addiction was more difficult than heroin, cocaine, or alcohol that it was very possible. While quitting may be the most difficult thing he would ever do, it would also be the most worthwhile.

In speaking with Mr. R., I stressed the **health benefits of quitting** rather than talking about health risks from smoking. I explained the goal of quitting was not to stop wanting to smoke but to stop the behavior of smoking. He may want a cigarette the rest of his life—not to the degree on first quitting—but, that doesn’t mean he has to smoke the rest of his life! Quitting isn’t about willpower—it is about taking control over an addiction that now controls his life.

I also spoke to Mr. R. about cessation medications. He decided he would try Chantix. Mr. R. decided to set a quit date 3 weeks post our meeting. I asked him to follow up with me by phone and he did. Mr. R. reported that he pushed his quit date back by one week. He decided to cut down a bit first. He was on Chantix for 4 full weeks before noticing any effect but after that he felt it was very beneficial in the quitting process.

Six months after our meeting, Mr. R. e-mailed me from Paris. He and Helen were enjoying a very happy honeymoon; Mr. R. was still not smoking and very confident he would remain tobacco free. Mr. R. stayed on Chantix for 4 months and knows he can use it again should the need arise. He did gain a bit of weight but felt with exercise he would soon lose those extra pounds. He felt “tremendous” and was so glad that Helen had encouraged him to quit.

Carol Southard, RN, MSN, Project Consultant
ADHA Smoking Cessation Initiative

SECTION 10 PRACTICAL FOCUS—FICTITIOUS PATIENT CASE FOR TOBACCO CESSATION

DIRECTIONS:**Fictitious Patient Case A: Mr. Alan Ascari**

- The fictitious patient case in this module involves Patient A, Mr. Alan Ascari.
- While completing the Practical Focus section in this module, you should take into account the health history and over-the-counter/prescription drug information that were revealed for Mr. Ascari in Module 4, Medical History and Module 9, Vital Signs.
- Review Mr. Ascari's Smoking History form on the next page of this module.
- Using Peak Procedure 10-1 for guidance, role-play tobacco cessation counseling with a classmate portraying Mr. Ascari. Remember to use the patient resource handouts from section during the role-play.

Smoking History

Patient ALAN ASCARI Date 1/15/XX

1. At what age did you begin to smoke? 15
2. How many cigarettes do you smoke per day now? 2 PACKS
Per day at your heaviest? 2 PACKS
3. How many times have you tried to stop smoking? 2
☐ Never tried to stop
4. What is the longest period of time you have gone without smoking? 2 DAYS
5. What forms of tobacco are you currently using? (Please check all that apply.)
☒ Cigarettes ☒ Chewing tobacco AT WORK
☐ Pipes ☐ Snuff
☐ Cigars ☐ Other
6. Do your ☐ family members, ☐ friends, ☒ co-workers smoke? (Please check all that apply. Circle if you live with any of these smokers.)
7. What smoking cessation methods have you tried? (Please check all that apply.)
☐ None ☐ Self-help programs
☒ Cold turkey ☐ Gradual reduction
☒ Hypnosis ☐ Laser
☐ Acupuncture ☐ Other _____
8. Are you being ☒ encouraged, or ☐ discouraged to stop smoking by any of the following? (Please check all that apply.)
☒ Spouse or significant other ☐ Friend
☒ Child ☐ Co-worker
☐ Other family member
9. Who do you turn to for support? (Please check all that apply.)
☒ Spouse or significant other ☐ Counselor
☐ Parent ☐ Health care provider
☐ Sibling ☐ Friend
☐ Other family member ☐ Co-worker
☐ Clergy/rabbi/priest

Please rank the following on a scale of 1 (strongly disagree) to 5 (strongly agree):

I am ready to stop smoking at this time: 1 2 3 4 5
 I am concerned about weight gain: 1 2 3 4 5
 I am concerned about dealing with stress: 1 2 3 4 5

Alan Ascari
Patient Signature

John Schiff, DH I
Reviewed by

Figure 10-26. Mr. Ascari's completed Smoking History form.

SECTION 11 QUICK QUESTIONS

1. Why has tobacco use been suggested as the fifth vital sign?
 - A. Because about 30% of all dental patients are smokers
 - B. Tobacco use is a contributing factor in many medical conditions
 - C. Most people see their dentist every 6 months
 - D. Smoking stains the teeth and is an esthetic problem
2. Smoking increases the risks of numerous diseases and death. Routine exercise and vitamins can counteract damage to the body caused by smoking.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
3. The leading **preventable** cause of illness and death is:
 - A. Smoking
 - B. Heart disease
 - C. Periodontal disease
 - D. Cancer
4. Conditions that increase a person's chances of getting a disease are termed:
 - A. Iatrogenic factors
 - B. Addictive factors
 - C. Incidence factors
 - D. Risk factors
5. Smoking appears to be one of the most important risk factors in the development of periodontal disease. Periodontal health does improve with smoking cessation.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
6. Smokers are much more likely than non-smokers to have severe bone loss. Smokers respond very well to periodontal treatment provided that they have excellent plaque control.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
7. Bleeding on probing is evident when a smoker has gingivitis or periodontitis. The extent of periodontal disease is directly related to the number of cigarettes smoked and the number of years of smoking.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.

8. Regular use of smokeless tobacco should be encouraged as a safe alternative to smoking. Tobacco water pipes (hookahs) are another safe alternative to smoking cigarettes
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
9. Clinical signs of oral cancer in a regular user of smokeless tobacco are:
- A. A white patch
 - B. Red scores
 - C. Blue nodules
 - D. Both answers A and B
10. Individuals exposed to secondhand smoke are at increased risk for cardiopulmonary problems. Children exposed to secondhand smoke are at increased risk for respiratory tract infections and middle ear infections.
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
11. Smokers over the age of 50 should not be encouraged to quit smoking, as the damage to the body cannot be reversed after many years of smoking. Many smokers underestimate the risk of getting a disease from smoking.
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
12. List and explain the three steps in the ADHA's Smoking Cessation Initiative.
- (1). _____

- (2). _____

- (3). _____

SECTION 12 COMMUNICATION

SKILL CHECKLIST

ROLE-PLAY TOBACCO CESSATION COUNSELING

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of the patient.
- Student 2 = Plays the role of the clinician.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play. Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Asks the patient if he or she uses tobacco.		
Advises the patient that quitting is important for wellness and longevity. Asks the patient if he or she is interested in learning about tobacco cessation.		
Encourages patient questions about the health risks of tobacco use and the tools for tobacco cessation.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level avoiding dental/medical terminology or jargon.		
Provides the patient with quitline telephone numbers or websites and patient education materials on tobacco cessation.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		

Sum of "S"s _____ divided by Total Points Possible (6) equals the percentage Grade _____

NOTES

NOTES

MODULE 11

Soft Tissue Lesions

MODULE OVERVIEW

This module discusses recognition of soft tissue lesions of the skin and oral mucosa. It presents a systematic approach to describing pertinent characteristics of soft tissue lesions. The ability to formulate a concise, accurate verbal and written description of any lesion is a necessary skill when communicating and documenting findings from the extraoral and intraoral examination.

This module covers:

- Recognizing the primary types of soft tissue lesions
- Formulating a written description of a soft tissue lesion
- Prevention of skin and oral cancers

Before beginning this module, you should have completed the content on soft tissue lesions in a dental theory textbook.

MODULE OUTLINE

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SKILL GOALS

- Explain the importance of inspecting the head, neck, and oral cavity for the presence of oral lesions.
- Define the key terms used in this module:

Discrete	Nodule
Grouped	Wheal
Confluent	Vesicle
Linear	Bulla
Macule	Pustule
Patch	Ulcer
Papule	Fissure
Plaque	
- Given an image of a lesion, use the Lesion Descriptor Worksheet to identify the location and characteristics of the lesion and to develop a written description of the lesion.
- Recognize findings that have implications in planning dental treatment.
- Provide appropriate referral to a physician or dental specialist when findings indicate the need for further evaluation.
- Demonstrate knowledge of soft tissue lesions by applying information from this module to the fictitious patient cases A–E found in Modules 12 and 13.

NOTE TO COURSE INSTRUCTOR: Fictitious Patient Cases A–E for this topic are located in Module 12, Head and Neck Examination, and Module 13, Oral Examination.

SECTION 1 LEARNING TO LOOK AT LESIONS

Inspection of the skin and oral mucosa for soft tissue lesions is an important part of every head and neck examination and intraoral examination. By performing routine screenings, dental health care providers can reduce deaths from skin, oral, and pharyngeal cancers.

WHY LOOK FOR LESIONS?

The most effective approach to decreasing the number of deaths associated with soft tissue cancers is through early detection and appropriate treatment and referral. In June 2003, the American Dental Association (ADA) launched a campaign urging dental professionals to examine patients for signs of early soft tissue lesions. Most Americans visit a dental office or clinic at least once a year. For this reason, dental health care providers have a unique opportunity to help decrease skin and oral cancer rates by routinely performing head, neck, and intraoral examinations. Early detection of skin and oral cancers is critical in the prevention of cancer deaths. When detected at their earliest stages, skin and oral cancers are more easily treated and cured.

Cancer Facts and Statistics

1. Skin Cancer

- Skin cancer is the most common of all cancer types.
- More than 1 million skin cancers are diagnosed each year in the United States. The number of skin cancers has been on the rise steadily for the past 30 years.
- There are two main types of skin cancers—melanomas and non-melanomas.
- Melanomas are much more likely to spread to other parts of the body and account for over 60% of skin cancer deaths. *Melanoma is almost always curable in its early stages.*
- Non-melanomas—such as basal cell and squamous cell cancers—are the most common cancers of the skin. Non-melanomas rarely spread elsewhere in the body and are less likely than melanomas to be fatal.

2. Oral and Pharyngeal Cancer

- Approximately 30,000 new cases of oral and pharyngeal cancer are diagnosed each year in the United States.
- More than one in four people affected with oral cancer will die—about one person each hour. According to the American Cancer Society, oral cancer claims almost as many lives as melanoma cancer.

What is a Soft Tissue Lesion

A **soft tissue lesion** is an area of abnormal appearing skin or mucosa that does not resemble the soft tissue surrounding it. Lesions are variations in color, texture, or form of an area of skin or mucosa. A soft tissue lesion may be:

- Present at birth—such as a mole or birthmark
- Associated with an infection—such as warts or acne
- Associated with an allergic reaction—such as hives
- Associated with an injury—such as a blister from a burn or scar from a cut

CHARACTERISTICS OF SOFT TISSUE LESIONS

Lesion Border Traits



Figure 11-1. Regular Border. The border of a lesion is **regular** if it resembles a symmetrical circle or an oval shape.



Figure 11-2. Irregular Border. The border of a lesion is **irregular** if it is not uniform, or has deviations from a circular or oval shape.

Lesion Margin Traits



Figure 11-3. Smooth Margin. The margin of a lesion is **smooth** if it is level with the surface of the lesion.



Figure 11-4. Raised Margin. The margin of a lesion is **raised** if it is above the level of the surface of the lesion.

Lesion Color

Lesions can be red, white, red and white, blue, yellow, brown, or black. Some examples are shown here.

Figure 11-5. Red and White Lesion. Shown here is an example of a red and white lesion.

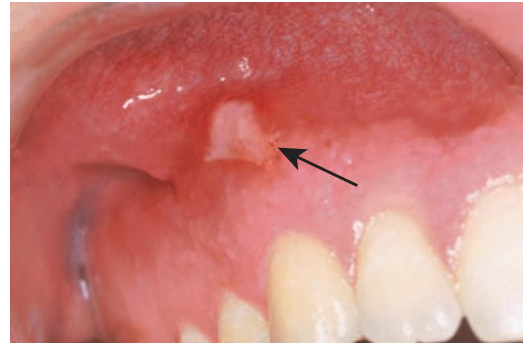


Figure 11-6. White Lesion. Shown here is an example of a raised white lesion on the buccal mucosa.



Figure 11-7. Yellow Lesion. Shown here is a yellow, crusty lesion on the ear.



Figure 11-8. Blue Lesion. Shown here is a group of blue lesions on the buccal mucosa.



Common Lesion Configurations

Configuration refers to the way that multiple lesions are arranged.



Figure 11-9. Discrete Configuration. Discrete lesions are individual lesions that are separate and distinct from one another.



Figure 11-10. Grouped Configuration. Lesions that are clustered together are described as grouped.



Figure 11-11. Confluent Configuration. Lesions that have merged together so that individual lesions are not distinguishable are termed confluent.



Figure 11-12. Linear Configuration. Lesions that form a line have a linear configuration.

BASIC TYPES OF SOFT TISSUE LESIONS

Flat Lesions

Figure 11-13. A **flat lesion** is one in which the surface of the lesion is the same as the normal level of the skin or oral mucosa. The only way that flat lesions can be detected is through a change in color from the surrounding skin or oral mucosa.

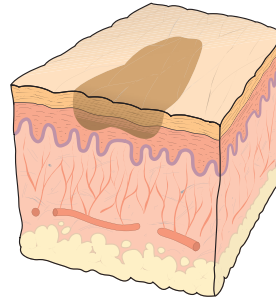


Figure 11-14. **Macule**—a small flat, discolored spot on the skin or mucosa that does not include a change in skin texture or thickness.

- A macule is less than 1 cm in size; the discoloration can be brown, black, red, or lighter than the surrounding skin.
- **Examples:** freckles, petechia, amalgam tattoo



Figure 11-15. This flat red lesion is an example of a macule on a patient's neck.



Figure 11-16. **Patch**—a flat, discolored area on the skin or mucosa.

- A patch is larger than 1 cm in size.
- **Examples:** lichen planus, snuff dipper's patch, port wine stain



Elevated Lesions

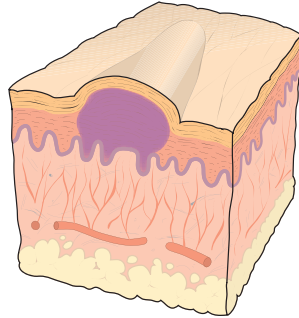


Figure 11-17. An **elevated** lesion is one in which the surface of the lesion is raised above the normal level of the skin or oral mucosa.

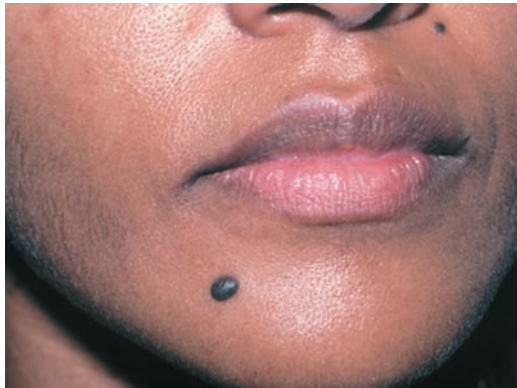


Figure 11-18. **Papule**—a solid raised lesion that is usually less than 1 cm in diameter.

- A papule may be any color.
- **Example:** an elevated mole



Figure 11-19. **Plaque**—a superficial raised lesion often formed by the coalescence (joining) of closely grouped papules.

- A plaque is more than 1 cm in diameter; a plaque differs from a nodule in its height, a plaque is flattened and a nodule is a bump
- **Examples:** leukoplakia, psoriasis



Figure 11-20. **Nodule**—a raised marble-like lesion detectable by touch, usually 1 cm or more in diameter.

- It can be felt as a hard mass distinct from the tissue surrounding it
- **Examples:** wart, basal cell carcinoma, melanoma, enlarged lymph node

Figure 11-21. Wheal—a raised, somewhat irregular area of localized edema.

- Wheals are often itchy, lasting 24 hours or less; usually due to an allergic reaction, such as to a drug or insect bite
- **Examples:** Mosquito bite, hives



Fluid-Filled Lesions

Figure 11-22. A **fluid-filled lesion** is an elevated lesion filled with clear fluid or pus.

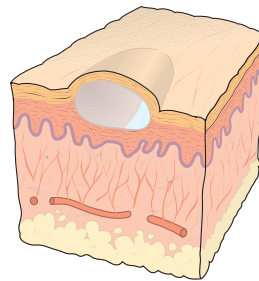


Figure 11-23. Vesicle—a small blister filled with a clear fluid.

- A vesicle usually is 1 cm or less in diameter.
- **Example:** herpes simplex, herpes zoster, chickenpox and smallpox lesions



Figure 11-24. Bulla—a large blister filled with clear fluid.

- A bulla is usually over 1 cm in diameter
- **Example:** blister, seen in burns.





Figure 11-25. Pustule—a small raised lesion filled with pus.

- Example: acne, boil, abscess

Depressed Lesion

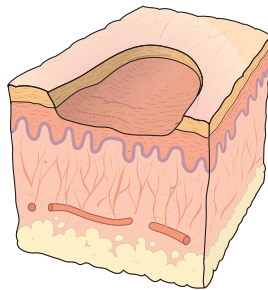


Figure 11-26. A **depressed** lesion is one in which the surface of the lesion is **below** the normal level of the skin or oral mucosa. Most depressed lesions are ulcers.

The depth of a depressed lesion is the distance from the base to the top of the lesion's margin. The depth of a lesion may be superficial or deep.



Figure 11-27. Ulcer—a crater-like lesion of the skin or mucosa where the top two layers of the skin are lost.

- The depth is **superficial** if it is less than 3 mm.
- Example: Aphthous ulcer, chickenpox lesions



Figure 11-28. An example of a **deep** ulcer with a depth that is more than 3 mm in depth.

Linear Cracks

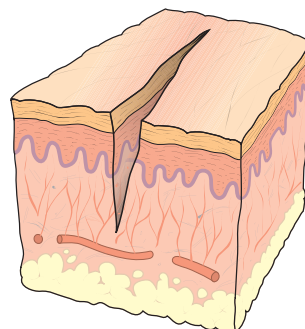


Figure 11-29. A **crack** is a long, narrow break in the surface of the skin or mucosa.



Figure 11-30. **Fissure**—a linear crack in the top two layers of the skin or mucosa.

- **Examples:** fissured tongue, angular cheilitis

THE ABC-T APPROACH TO FORMULATING LESION DESCRIPTIONS

The description a soft tissue lesion has two components: (1) *characteristics of the lesion* and (2) *type of lesion*. A lesion's characteristics include its anatomic location, border traits, color, configuration, and diameter or dimensions. Primary types of lesions are flat, elevated, fluid-filled, and depressed lesions.

Since each lesion has so many characteristics, it is common for clinicians to feel overwhelmed when trying to create a verbal description of a lesion. To assist clinicians in remembering the characteristics to document, it is helpful to remember the letters **ABCD** and **T** (Box 11-1).

Box 11-1. Remembering What to Look For

Use the letters **ABCD** and **T** to help you remember the characteristics to look for on a lesion.

- A**—Anatomic location
- B**—Border
- C**—Color and Configuration
- D**—Diameter or Dimensions
- T**—Type

SECTION 2 PEAK PROCEDURE: DESCRIBING LESIONS

Procedure 11-1. Determining and Describing Lesion Characteristics

ACTION	RATIONALE
I. Determine Lesion Characteristics. Use the Lesion Descriptor Worksheet from the Ready References section of this module. Circle or highlight the words that describe the lesion. A—Anatomic location. Describe the anatomic location of the lesion. B—Border. Examine the lesion to see if the border is symmetrical (having balanced proportions, equal halves from the center dividing line) or asymmetrical (unequal halves). Examine the border to see if it is well demarcated, regular, or irregular. C—Color and Configuration. Note the color of the lesion. Record the configuration of the lesion(s). Is this a single lesion? Are the lesions separate, clustered together, grouped, confluent, or linear? D—Diameter or Dimensions. Measure the size of the lesion using a plastic millimeter ruler if the lesion is on the skin. Use a periodontal probe for intraoral lesions. T—Type. Identify the type of lesion such as macule, vesicle, etc.	• The Lesion Descriptor Worksheet makes it easy to identify the characteristics of a particular lesion. • This allows other clinicians to locate the lesion from your written description. • An asymmetrical lesion with an irregular border may indicate a malignant lesion. • Lesions can change color over time. A color change may indicate a malignant lesion. • Many skin diseases have lesions in a typical configuration. • Over time, a change in size may indicate a malignant lesion. • The type of lesion is an important component of the description of a lesion.

(continued)

Procedure 11-1. Determining and Describing Lesion Characteristics (continued)

ACTION	RATIONALE
2. Document Lesion Location. Indicate the location of lesion on the appropriate illustration on the Lesion Descriptor Worksheet.	• The rationale for drawing the lesion is not to create an artistic likeness of it. • Drawing the lesion on an anatomic illustration assists other clinicians in quickly locating the lesion now and at future appointments, if applicable.
3. Develop a Written Description. After circling or highlighting the words on the Lesion Descriptor Worksheet that pertain to the lesion, you are ready to formulate a description for the lesion. For example: A —Anatomic location: left buccal mucosa near tooth #14 B —Border: well demarcated C —Color and Configuration: blue D —Diameter or Dimensions: 4 mm × 2 mm T —Type: macule	
4. Finalize the Description. Next, use the outline to create a description and enter it at the bottom of page 2 of the Lesion Descriptor Worksheet . For example, using the words outlined above, the description might be: <i>On the left buccal mucosa near tooth #14, a well demarcated, blue, 4 mm × 2 mm macule.</i>	
5. Document the Lesion. Enter the lesion description and date in the patient's chart or computerized record.	

SECTION 3 DETECTION AND PREVENTION

TOOLS FOR CANCER DETECTION OF SKIN AND ORAL CANCERS

In the dental setting, the three primary tools for the detection of soft tissue lesions are the head and neck examination, oral examination, and patient history. Medical history questionnaires should include questions that elicit information about tobacco and alcohol use, as well as interest in smoking cessation programs.

Box 11-2. Dental Professional's Role in Cancer Detection

A thorough examination of the head, neck, and oral cavity should be a routine part of each dental visit. Clinician's should be particularly vigilant with patients who use tobacco and alcohol.

- **EXAMINE** the patient at each visit using a systematic visual inspection of the head, neck, and oral cavity.
- **ENSURE** the health history questionnaire elicits information about tobacco and alcohol use.
- **EDUCATE** the patient that tobacco and alcohol use dramatically increases the risk of oral cancer.
- **IDENTIFY** and document any suspicious soft tissue lesions.
- **REFER** to a dermatologist—for skin lesions—or an oral maxillofacial surgeon—for oral lesions—to obtain a definitive diagnosis of the suspicious lesion.
- **FOLLOW-UP** to make sure that a definitive diagnosis was obtained.

SMOKING CESSATION COUNSELING

The oral examination provides the perfect opportunity to discuss smoking cessation with your patient. By advising patients to quit smoking, dental professionals can assist patients in reducing their risk of oral cancer and other life-threatening diseases, such as coronary heart disease. Dental health care providers can promote health wellness by counseling patients about the **three primary controllable risk factors for skin and oral cancers: (1) sun exposure, (2) smoking, and (3) alcohol consumption.**

- “Ask. Advise. Refer.” is the ADHA’s smoking cessation initiative designed to encourage dental hygienists to educate patients about smoking cessation resources.
- Smokers are more likely to quit if advised to do so by health professionals. Virtually no expertise is needed to refer patients to a telephone quitline or website.
- **Quitlines** are toll-free telephone centers staffed by trained smoking cessation experts. It takes as little as 30 seconds to refer a patient to a quitline or website.
- Evidence suggests quitline use more than triples success in quitting. Internet resources for smoking cessation are listed in the Ready References section of this module.

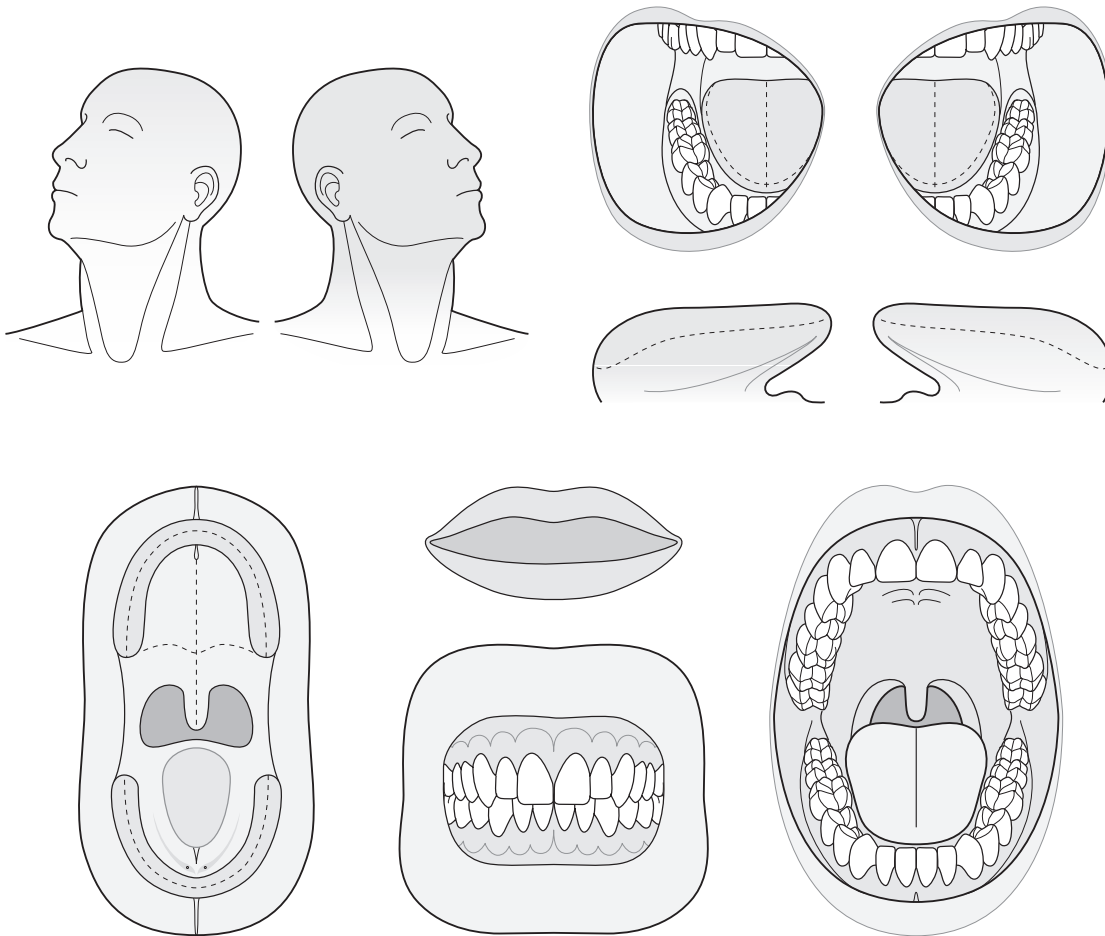
SECTION 4 READY REFERENCES

Lesion Descriptor Worksheet		
Directions: Highlight or circle the applicable descriptors		
(A) Anatomic Location		<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
		<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
		<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
		<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
(T) Type	Nonpalpable Flat Lesions	<i>Macule</i> - Flat discolored spot, less than 1 cm in size <i>Patch</i> - Flat discolored spot, larger than 1 cm in size
	Palpable, Elevated, Solid Masses	<i>Papule</i> - Solid raised lesion, less than 1 cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1 cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1 cm in diameter <i>Wheal</i> - Localized area of skin edema
	Fluid-Filled Lesions	<i>Vesicle</i> - Small blister filled with clear fluid, less than 1 cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1 cm in diameter <i>Pustule</i> - Small raised lesion filled with pus
	Loss of Skin or Mucosal Surface	<i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 11-31A. Page 1 of the Lesion Descriptor Worksheet.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.

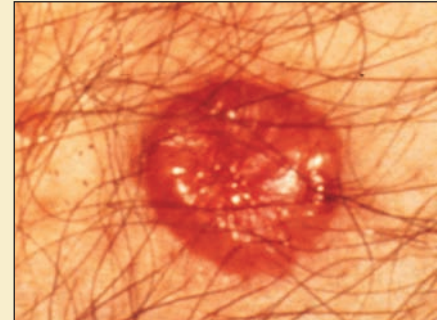


Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 11-31B. Page 2 of the Lesion Descriptor Worksheet.

Ready Reference 11-1. Characteristics of Common Cancerous Lesions**TYPE****APPEARANCE****Basal Cell Carcinoma****60% of skin cancers**

- A**—face
- B**—round at first, later irregular
- C**—skin-colored, pink, dark brown, black

**Figure 11-32A.****Squamous Cell Carcinoma****20% of skin cancers**

- A**—areas exposed to sunlight; lip
- B**—poorly-demarcated raised border; raised border with central ulceration
- C**—skin-colored, reddened; new lesions may appear near old ones

**Figure 11-32B.****Malignant Melanoma****Accounts for over 60% of skin cancer deaths**

- A**—areas exposed to sunlight
- B**—becomes irregular as it grows
- C**—may have pink or red halo

**Figure 11-32C.****Kaposi's Sarcoma**

- A**—skin; mucous membranes
- B**—raised border; well demarcated
- C**—intense red, blue, or brown: color does not blanch

**Figure 11-32D.**

Ready Reference 11-2. Internet Resources: Lesions

<http://www.dermnetnz.org>

Derm Net Nz is the website of the New Zealand Dermatological Society. This website has a list of skin disorders and conditions, which includes descriptions and often images.

<http://www.dentistry.vcu.edu/about/departments/opath/labcase/textfiles/descriptions/descxray.html>

Basic Diagnostic Skills: Describing Soft Tissue Lesions on the website of Virginia Commonwealth University School of Dentistry, Oral and Maxillofacial Pathology Diagnostic Service. This module discusses the site, morphology, and color of soft tissue lesions.

<http://www.pediatrics.wisc.edu/education/derm>

Primary Care Dermatology Module Nomenclature of Skin Lesions on the website of the University of Wisconsin, Madison. Click on the Tutorials box for descriptions and images of common skin lesions. An excellent site with three tutorials: (1) primary lesions, (2) secondary lesions, and (3) patterns and distributions.

<http://www.library.vcu.edu/tml/oralpathology>

Oral Pathology Review Images on the Virginia Commonwealth University School of Dentistry, Department of Oral Pathology website is an excellent collection of images of the most common abnormalities of the oral cavity.

<http://www.uiowa.edu/~oprml/AtlasHome.html>

The **Oral Pathology Database** on the website of the University of Iowa College of Dentistry.

This atlas shows multiple examples of important lesions of the oral cavity.

http://www.usc.edu/hsc/dental/PTHL312abc/312b/07/Reader/reader_set.html

An online module on **Oral Lesions: Classification and Appearances** on the website of the University of Southern California School of Dentistry.

<http://www.aafp.org/afp/980915ap/rose.html>

The website of the American Family Physician Journal includes the online article,

Recognizing Neoplastic Skin Lesions: A Photo Guide. This article contains excellent information and images of cancerous skin lesions.

http://www.cancer.org/docroot/PED/ped_0.asp

Information on cancer prevention and detection on the website of the **American Cancer Society**.

<http://www.nci.nih.gov>

The **National Cancer Institute** (U.S. National Institutes of Health) website is an outstanding source of information on cancer prevention, detection, treatment, and cancer statistics.

SECTION 5 THE HUMAN ELEMENT

Box 11-3. Through the Eyes of a Student

Our school had just switched to a new medical history form and the new form has two columns of information. Even after using this new form for some time, I think that it is easy to miss some of the questions when reviewing the patient's answers.

Today, I was seeing a new patient, Mr. U. I had forgotten to look at the tobacco use question. So, I did not read that my patient had been chewing tobacco for over 10 years. If I had read this information, I would not have made my next mistake.

I did a quick oral exam and accidentally overlooked some suspicious tissue changes on the lower anterior mucolabial fold. I did not notice until my instructor came to assist me. She showed me where Mr. U. held his tobacco in his mouth and how the tissue looked different. He had what would be considered precancerous tissue changes. I explained to Mr. U. the risk of developing cancer and he seemed ready to change this habit. I may have helped to save my patient's life or at least decreased his risk of developing oral cancer. You can bet that I will never take the oral examination lightly ever again.

Kimberly, student
Tallahassee Community College

SOURCES OF CLINICAL PHOTOGRAPHS

The author gratefully acknowledges the sources of the following clinical photographs in this module.

- Figure 11-1. Dr. John S. Dozier, Tallahassee, Florida.
- Figure 11-2. Dr. Michael A. Huber, University of Texas Health Science Center at San Antonio.
- Figure 11-3. Dr. Michael A. Huber, University of Texas Health Science Center at San Antonio.
- Figure 11-4. CDC Public Health Image Library.
- Figure 11-5. Dr. Richard Foster, Guilford Technical Community College.
- Figure 11-6. Dr. Richard Foster, Guilford Technical Community College.
- Figure 11-7. Dr. Charles Goldberg, University of California San Diego School of Medicine.
- Figure 11-8. Dr. Richard Foster, Guilford Technical Community College.
- Figure 11-9. Dr. Richard Foster, Guilford Technical Community College.
- Figure 11-10. Dr. Richard Foster, Guilford Technical Community College.
- Figure 11-11. Courtesy of Dr. Michael A. Huber, University of Texas Health Science Center at San Antonio.
- Figure 11-12. Dr. Richard Foster, Guilford Technical Community College.
- Figure 11-14. From Goodheart HP, MD. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-16. From Weber J RN, Ed. and Kelley J RN, PhD. *Health Assessment in Nursing*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-18. From Goodheart HP, MD. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-19. From Goodheart HP, MD. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-20. Dr. Michael A. Huber, University of Texas Health Science Center at San Antonio.

SOURCES OF CLINICAL PHOTOGRAPHS (continued)

The author gratefully acknowledges the sources of the following clinical photographs in this module.

- Figure 11-21. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-23. Reprinted with permission from Bickley LS. *Bate's Guide to Physical Examination and History Taking*, 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-24. Image provided by Stedman's.
- Figure 11-25. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-27. Dr. Marci Marano Beck, Tallahassee, Florida.
- Figure 11-28. From the National Cancer Institute, Bethesda, Maryland.
- Figure 11-30. From Neville B, Damm DD, White DK. *Color Atlas of Clinical Oral Pathology*. Philadelphia: Lea & Febiger; 1991.
- Figure 11-32A. From the National Cancer Institute, Bethesda, Maryland.
- Figure 11-32B. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-32C. From the National Cancer Institute, Bethesda, Maryland.
- Figure 11-32D. From Weber J, Kelley J. *Health Assessment in Nursing*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-33. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-35. From Young EM Jr., Newcomer VD, Young EM. *Geriatric Dermatology: Color Atlas and Practitioner's Guide*. Philadelphia: Lea & Febiger; 1993.
- Figure 11-37. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 11-39. Image Provided by Stedman's.
- Figure 11-41. Dr. Richard Foster, Guilford Technical Community College.

SECTION 6 PRACTICAL FOCUS—LESION DESCRIPTIONS

DIRECTIONS:

- Use the steps outlined in Procedures 11-1 and 11-2 and the Lesion Descriptor Worksheet to develop descriptions for the four lesions in this section.
- An example is provided as a guide for completing this section of the module.
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.

EXAMPLE:

Location: left buccal mucosa

Size: 6 mm in length, 4 mm in width



Figure 11-33.

EXAMPLE: Worksheet page 1

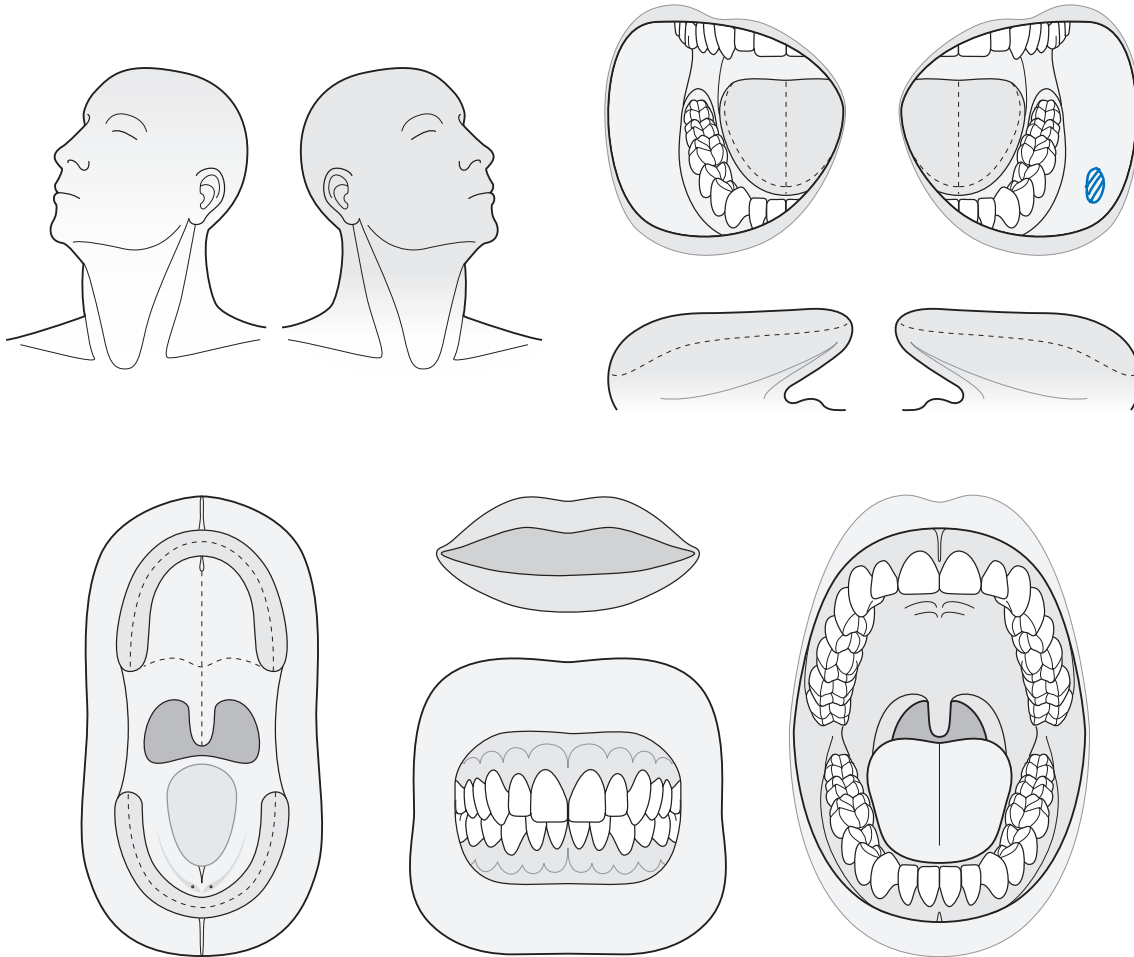
Lesion Descriptor Worksheet <i>Directions: Highlight or circle the applicable descriptors</i>		
(A) Anatomic Location		<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
(B) Border		<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
(C) Color Change Configuration		<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
(D) Diameter/Dimension		<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
(T) Type	Nonpalpable Flat Lesions Palpable, Elevated, Solid Masses Fluid-Filled Lesions Loss of Skin or Mucosal Surface	<i>Macule</i> - Flat discolored spot, less than 1 cm in size <i>Patch</i> - Flat discolored spot, larger than 1 cm in size <i>Papule</i> - Solid raised lesion, less than 1 cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1 cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1 cm in diameter <i>Wheal</i> - Localized area of skin edema <i>Vesicle</i> - Small blister filled with clear fluid, less than 1 cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1 cm in diameter <i>Pustule</i> - Small raised lesion filled with pus <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 11-34A. Page 1 of Lesion Descriptor Sheet for example lesion.

EXAMPLE: Worksheet page 2

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

**ON THE LEFT BUCCAL MUCOSA ABOVE TOOTH 20, A SINGLE
6MM (ANTERIOR TO POSTERIOR LENGTH) X 4MM (WIDTH), RED AND WHITE
IRREGULARLY SHAPED ULCER.**

Figure 11-34B. Page 2 of Lesion Descriptor Sheet for Example Lesion.

Lesion 1

Location: underside of left ear lobe

Size: 1.5 cm in diameter



Figure 11-35.

Lesion I

Lesion Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

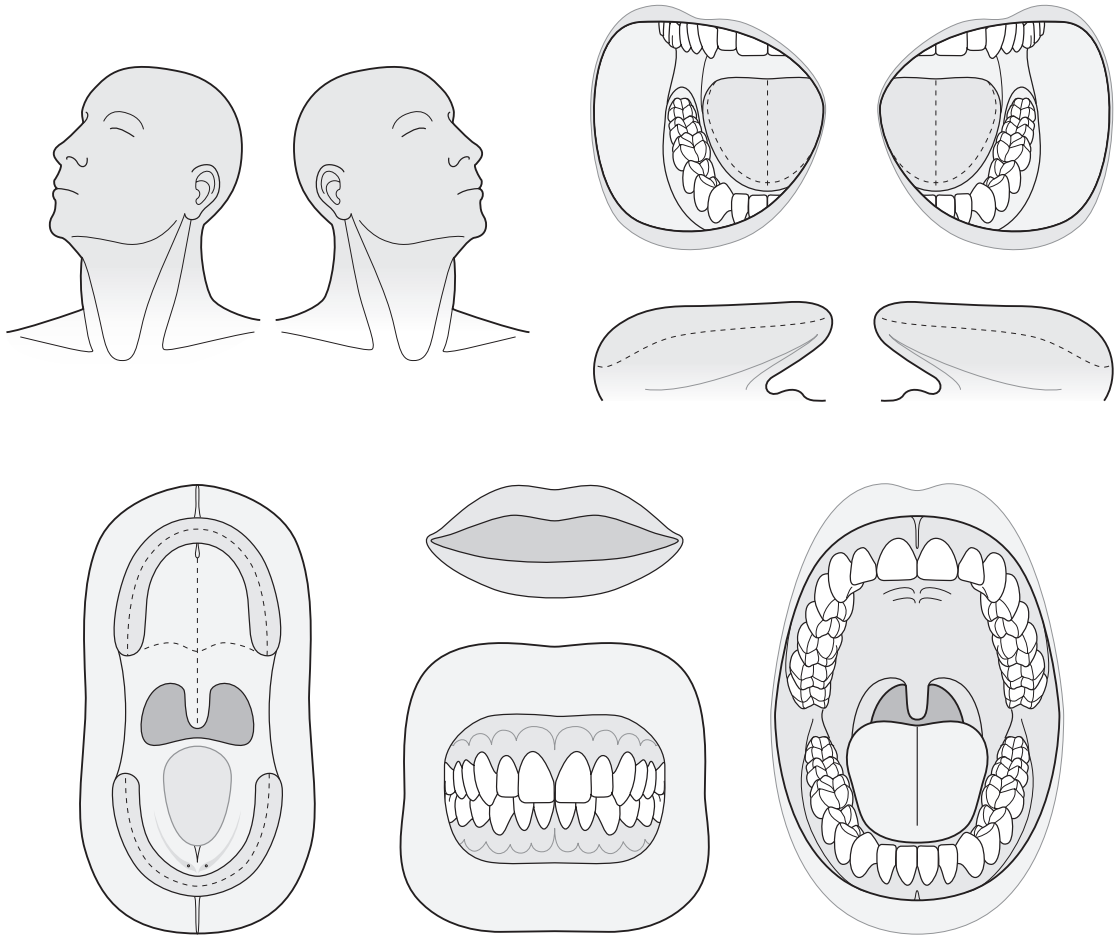
(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermilion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
(B) Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
(C) Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
(D) Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
(T) T y p e	Nonpalpable Flat Lesions <i>Macule</i> - Flat discolored spot, less than 1cm in size <i>Patch</i> - Flat discolored spot, larger than 1cm in size Palpable, Elevated, Solid Masses <i>Papule</i> - Solid raised lesion, less than 1cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1cm in diameter <i>Wheal</i> - Localized area of skin edema Fluid-Filled Lesions <i>Vesicle</i> - Small blister filled with clear fluid, less than 1cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1cm in diameter <i>Pustule</i> - Small raised lesion filled with pus Loss of Skin or Mucosal Surface <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 11-36A. Page I of Lesion Descriptor Worksheet for use with lesion I.

Lesion 1

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 11-36B. Page 2 of Lesion Descriptor Worksheet for use with lesion 1.

Lesion 2

Location: labial mucosa

Size: 6 mm in length by 4 mm in width



Figure 11-37.

Lesion 2

Lesion Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

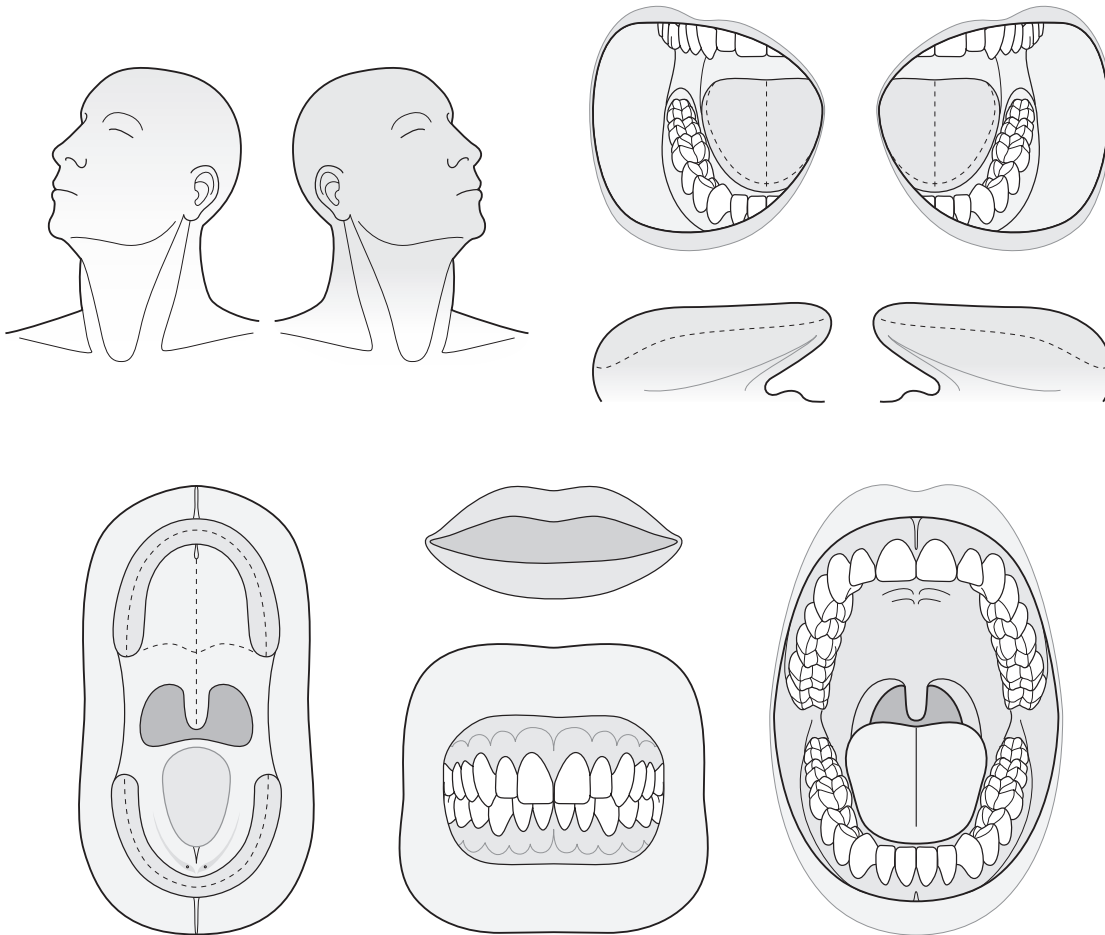
Ⓐ Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
Ⓑ Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
Ⓒ Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
Ⓓ Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
Ⓓ Type	Nonpalpable Flat Lesions <i>Macule</i> - Flat discolored spot, less than 1 cm in size <i>Patch</i> - Flat discolored spot, larger than 1 cm in size Palpable, Elevated, Solid Masses <i>Papule</i> - Solid raised lesion, less than 1 cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1 cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1 cm in diameter <i>Wheal</i> - Localized area of skin edema Fluid-Filled Lesions <i>Vesicle</i> - Small blister filled with clear fluid, less than 1 cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1 cm in diameter <i>Pustule</i> - Small raised lesion filled with pus Loss of Skin or Mucosal Surface <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 11-38A. Page 1 of Lesion Descriptor Worksheet for use with lesion 2.

Lesion 2

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 11-38B. Page 2 of Lesion Descriptor Worksheet for use with lesion 2.

Lesion 3

Location: right side, back of neck

Size: each lesion is 6 mm in diameter



Figure 11-39.

Lesion 3

Lesion Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

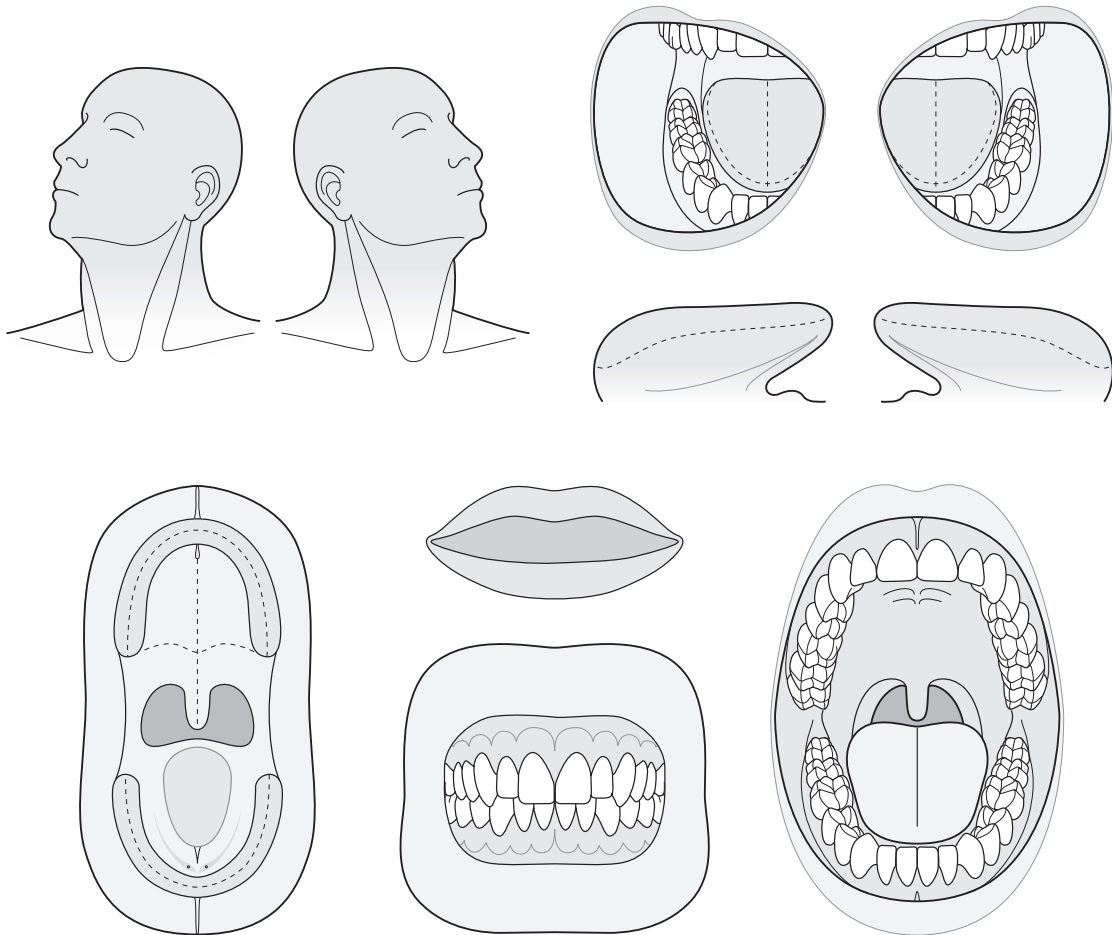
Ⓐ Anatomic Location		<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
		<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
		<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
		<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
Ⓣ T y p e	Nonpalpable Flat Lesions	<i>Macule</i> - Flat discolored spot, less than 1cm in size <i>Patch</i> - Flat discolored spot, larger than 1cm in size
	Palpable, Elevated, Solid Masses	<i>Papule</i> - Solid raised lesion, less than 1cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1cm in diameter <i>Wheal</i> - Localized area of skin edema
	Fluid-Filled Lesions	<i>Vesicle</i> - Small blister filled with clear fluid, less than 1cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1cm in diameter <i>Pustule</i> - Small raised lesion filled with pus
	Loss of Skin or Mucosal Surface	<i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 11-40A. Page 1 of Lesion Descriptor Worksheet for use with lesion 3.

Lesion 3

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 11-40B. Page 2 of Lesion Descriptor Worksheet for use with lesion 3.

Lesion 4

Location: right cheek

Size: 1.5 cm in length



Figure 11-41.

Lesion 4

Lesion Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

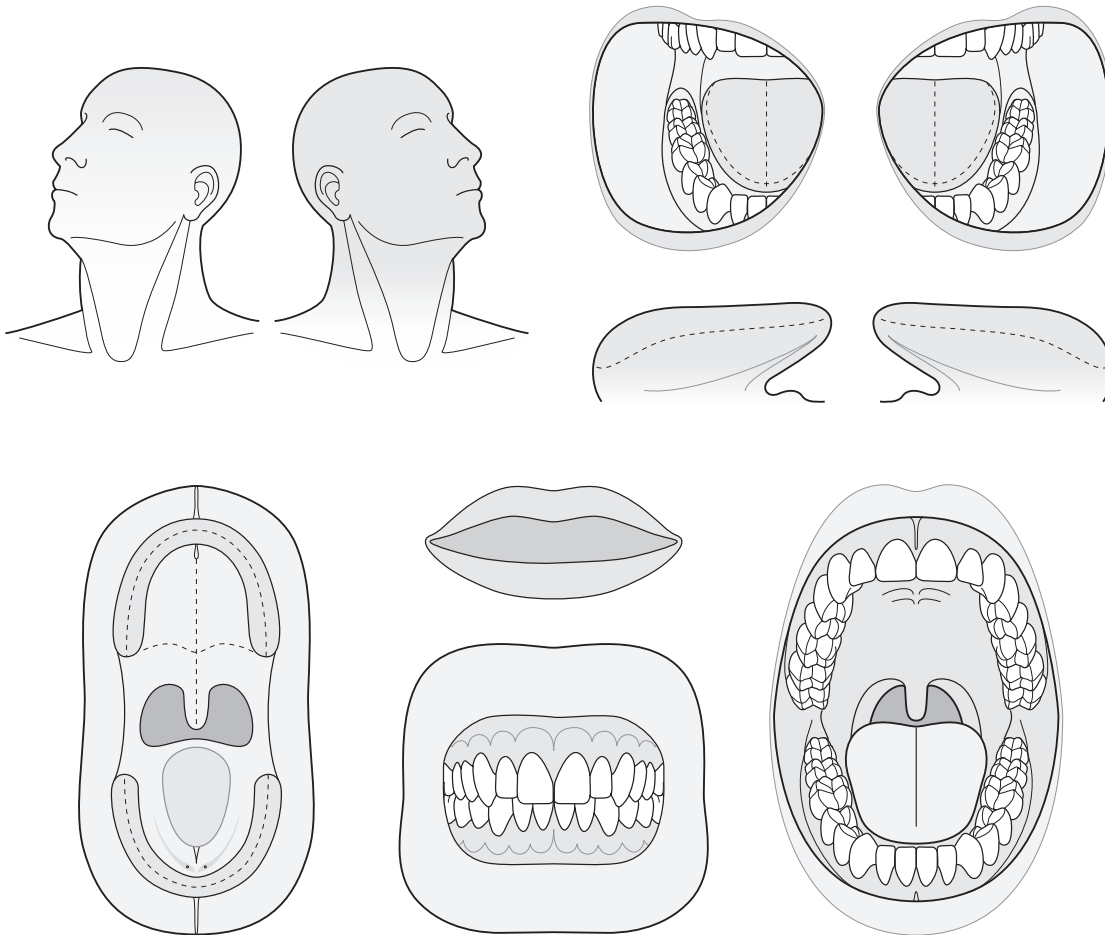
Ⓐ Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
Ⓑ Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
Ⓒ Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
Ⓓ Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
Ⓓ Type	<i>Nonpalpable Flat Lesions</i> <i>Macule</i> - Flat discolored spot, less than 1 cm in size <i>Patch</i> - Flat discolored spot, larger than 1 cm in size <i>Palpable, Elevated, Solid Masses</i> <i>Papule</i> - Solid raised lesion, less than 1 cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1 cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1 cm in diameter <i>Wheal</i> - Localized area of skin edema <i>Fluid-Filled Lesions</i> <i>Vesicle</i> - Small blister filled with clear fluid, less than 1 cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1 cm in diameter <i>Pustule</i> - Small raised lesion filled with pus <i>Loss of Skin or Mucosal Surface</i> <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 11-42A. Page 1 of Lesion Descriptor Worksheet for use with lesion 4.

Lesion 4

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 11-42B. Page 2 of Lesion Descriptor Worksheet for use with lesion 4.

SECTION 7 QUICK QUESTIONS

1. A lesion that is well demarcated is one that:
 - A. Is larger than 1 cm in diameter
 - B. Is difficult to see where the lesion begins and ends
 - C. Is easy to see where the lesion begins and ends
 - D. Has a very irregular border
2. Discrete lesions are:
 - A. Multiple lesions that are separate and distinct from one another
 - B. Multiple lesions that are clustered together
 - C. Multiple lesions that have merged together
 - D. Multiple lesions that form a line
3. A macule is:
 - A. A raised marblelike lesion usually 1 cm or more in diameter
 - B. A small blister filled with clear fluid, usually 1 cm or less in diameter
 - C. A craterlike lesion where the top two layers of the skin are lost
 - D. A small, flat, discolored spot on the skin
4. A nodule is:
 - A. A raised marblelike lesion usually 1 cm or more in diameter
 - B. A small blister filled with clear fluid, usually 1 cm or less in diameter
 - C. A craterlike lesion where the top two layers of the skin are lost
 - D. A small flat discolored spot on the skin
5. A vesicle is:
 - A. A raised marblelike lesion usually 1 cm or more in diameter
 - B. A small blister filled with clear fluid, usually 1 cm or less in diameter
 - C. A craterlike lesion where the top two layers of the skin are lost
 - D. A small, flat, discolored spot on the skin
6. An ulcer is:
 - A. A raised marblelike lesion usually 1 cm or more in diameter
 - B. A small blister filled with clear fluid, usually 1 cm or less in diameter
 - C. A craterlike lesion where the top two layers of the skin are lost
 - D. A small, flat, discolored spot on the skin
7. A lesion that is usually due to an allergic reaction, such as to a drug, is:
 - A. Bulla
 - B. Wheal
 - C. Fissure
 - D. Papule

- 8.** What type of lesion is found in 60% of all skin cancers?
- A.** Basal cell carcinoma
 - B.** Kaposi's sarcoma
 - C.** Malignant melanoma
 - D.** Squamous cell carcinoma
- 9.** Which of the following accounts for over 60% of deaths due to skin cancer?
- A.** Basal cell carcinoma
 - B.** Kaposi's sarcoma
 - C.** Malignant melanoma
 - D.** Squamous cell carcinoma
- 10.** Which of the following lesions has a raised border with a central ulceration?
- A.** Basal cell carcinoma
 - B.** Kaposi's sarcoma
 - C.** Malignant melanoma
 - D.** Squamous cell carcinoma

NOTES

MODULE 12

Head and Neck Examination

MODULE OVERVIEW

This module describes the head and neck examination. The head and neck examination is a physical examination technique consisting of a systematic visual inspection and palpation of the structures of the head and neck. A thorough head and neck examination should be a routine part of each patient's dental visit.

This module describes the head and neck examination, including:

- Review of anatomic structures of the head and neck
- Examination and palpation techniques
- Peak procedure for a systematic head and neck examination

Before beginning this module, you should have completed the chapter on extraoral examination of the head and neck in a dental theory textbook.

MODULE OUTLINE

SECTION 1	Examination Overview	390
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	Anatomy Review	
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	Lymph Nodes of the Head and Neck	
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	Thyroid Gland	
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SKILL GOALS

- Locate the (a) lymph nodes of the head and neck, (b) salivary and thyroid glands, and (c) temporomandibular joint (TMJ).
- Recognize the normal anatomy of the structures of the head and neck.
- Recognize deviations from normal of the skin, lymph nodes, salivary, and thyroid glands.
- Position the patient correctly for the head and neck examination.
- Provide information to the patient about the head and neck examination and any notable findings.
- Demonstrate the head and neck examination using correct technique and a systematic sequence of examination.
- Document notable findings in the patient chart or computerized record.
- Recognize findings that have implications in planning dental treatment.
- Provide referral to an appropriate specialist when findings indicate the need for further evaluation.
- Demonstrate knowledge of the head and neck examination by applying concepts from this module to the fictitious patient cases A to E found in Section 6.

SECTION 1 EXAMINATION OVERVIEW

The **head and neck examination** is a physical examination technique consisting of a systematic visual inspection of the skin of the head and neck combined with palpation of the lymph nodes, salivary glands, thyroid, and TMJ. This procedure takes only minutes and allows the clinician to gather general information on the health of a patient, note early indications of some diseases, and detect abnormalities and potentially life-threatening malignancies at an early stage. *The head and neck and intraoral examinations are the two most important clinical procedures that a clinician will ever master, as these examinations can literally save a patient's life.* The oral examination is presented in Module 10.

There are many structures to be assessed during the head and neck examination. To assist the clinician in performing a systematic examination, the structures are organized into four subgroups: (a) the overall appraisal of the head and neck, face, ears, and skin, (b) lymph nodes of the head and neck, (c) salivary and thyroid glands, and (d) TMJ.

OVERALL APPRAISAL OF THE HEAD AND NECK

The head and neck examination begins while greeting and seating the patient. While chatting with the patient, unobtrusively examine the head and neck area, including assessment of facial form and symmetry and inspection of the skin.

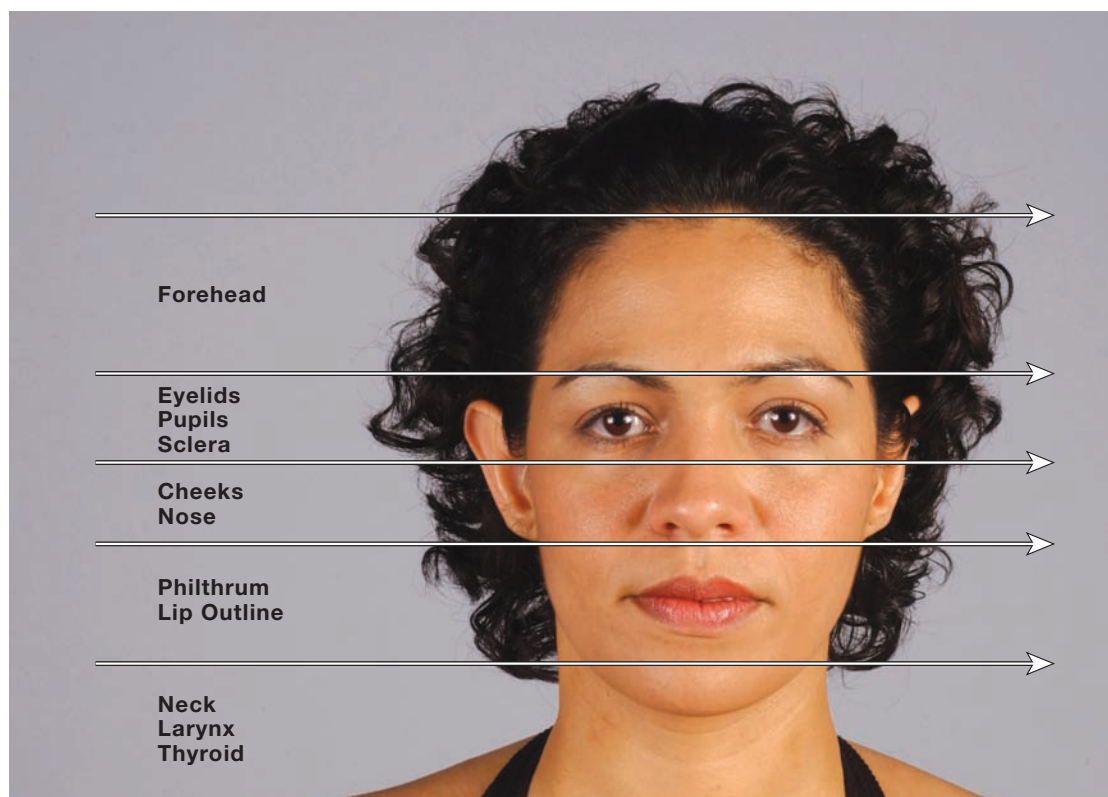


Figure 12-1. Overall appraisal. Divide the face and neck into imaginary zones. Scanning from right to left, inspect each zone carefully but unobtrusively. Note signs of asymmetry, hair loss, dilated or unequal pupils, involuntary facial movements, and variations such as changes in color, scars, lesions, or fissuring of the skin.

ANATOMY REVIEW

To perform an accurate head and neck examination, the clinician needs to know the anatomy of the eyes, ears, nose, and neck and recognize the clinical appearance of normal structures.

Eyes, Ears, and Nose

Knowledge of the landmarks of the eyes, ears, and nose is useful when recording the location of a soft tissue lesion or other notable findings.

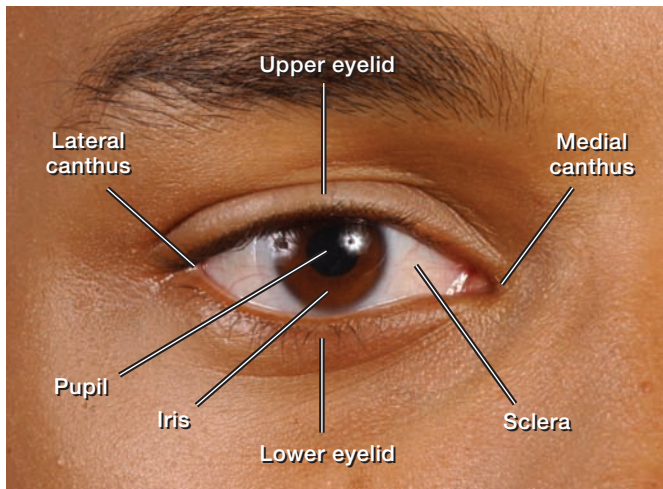


Figure 12-2. Landmarks of the eye. The sclera (white of the eye), pupil, and eyelids are anatomic landmarks of the eye.

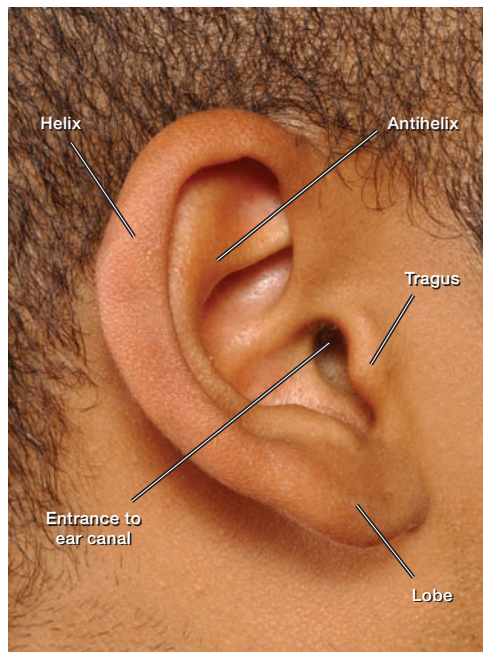


Figure 12-3. Landmarks of the ear and nose. External ear landmarks include the ear lobe, tragus, helix, antihelix, and entrance to the ear canal. Landmarks of the nose include the bridge, tip, anterior naris, and ala nasi.

Sternomastoid Muscle

The **sternomastoid muscle**—also known as the **sternocleidomastoid muscle**—is a long, thick superficial muscle on each side of the head with its origin on the mastoid process and insertion on the sternum and clavicle.

- This muscle acts to bend, rotate, and flex the head.
- The ability to locate the sternomastoid muscle is significant because *the cervical lymph nodes lie above, beneath, and posterior to this muscle.*

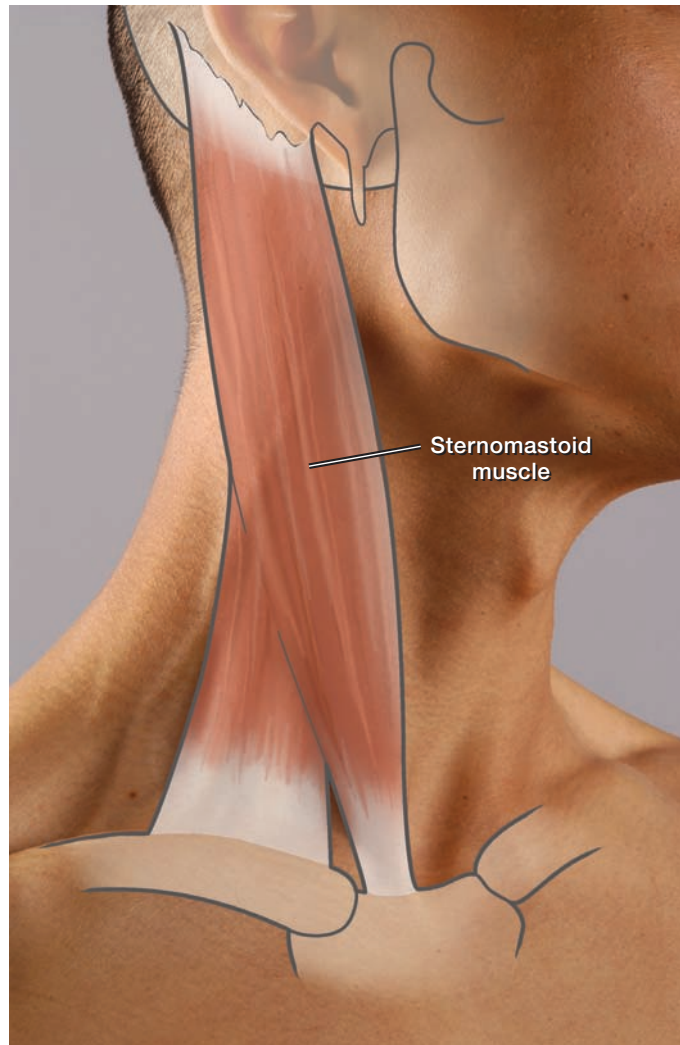


Figure 12-4. The sternomastoid muscle of the neck.

Lymph Nodes of the Head and Neck

The **lymphatic system** is a network of lymph nodes connected by lymphatic vessels that play an important part in the body's defense against infection. This system transports **lymph**—a clear fluid that carries nutrients and waste materials between the body tissues and the bloodstream. **Lymph nodes** (*limf* nodes) are small, bean-shaped structures that filter out and trap bacteria, fungi, viruses, and other unwanted substances to eliminate them safely from the body. All substances transported by the lymphatic system pass through at least one lymph node, where foreign substances can be filtered out and destroyed before fluids are returned to the bloodstream.

There are 400 to 700 lymph nodes in the body, **170 to 200 of which are located in the neck**. The major lymph node groups are located along the anterior and posterior aspects of the neck and on the underside of the jaw.

1. Normal lymph nodes can be as small as the head of a pin or the size of a pea or baked bean.
2. Lymph nodes can become **enlarged** due to infection, inflammatory conditions, an abscess, or cancer.
 - **Lymphadenopathy** (*lym·phad·e·nop·a·thy*) is the term for enlarged lymph nodes.
 - If the nodes are quite big, they may be visible bulging under the skin (Fig. 12-5), particularly if the enlargement is asymmetric (i.e., it will be more obvious if one side of the neck is larger than the other.)
3. By far the most common cause of lymph node enlargement is infection. In general, when swelling appears suddenly and is tender to the touch, it is usually caused by injury or infection.
 - When a part of the body is infected, the nearby lymph nodes become swollen as they collect and destroy the infecting organisms. For example, if a person has a throat infection, the lymph nodes in the neck may swell and become tender to the touch.
 - Nodes with a viral infection are usually 1/2 to 1 inch across.
 - Nodes with a bacterial infection usually are larger than 1 inch across, about the size of a quarter.
4. Node enlargement that comes on gradually and painlessly may result from cancer.
 - An enlarged lymph node might be a sign that the cancer has spread to a lymph node.
 - **Metastasis** is the spread of cancer from the original tumor site to other parts of the body by tiny clumps of cells transported by the blood or lymphatic system.
 - When oral cancer metastasizes, it most commonly spreads through the lymphatic system to the cervical chain of lymph nodes in the neck.
 - Lymph nodes can play a role in the spread of cancer, as the lymphatic system can transport cancer cells throughout the body.



Figure 12-5. Lymphadenopathy. An enlarged cervical lymph node. (Image provided by *Stedman's*.)

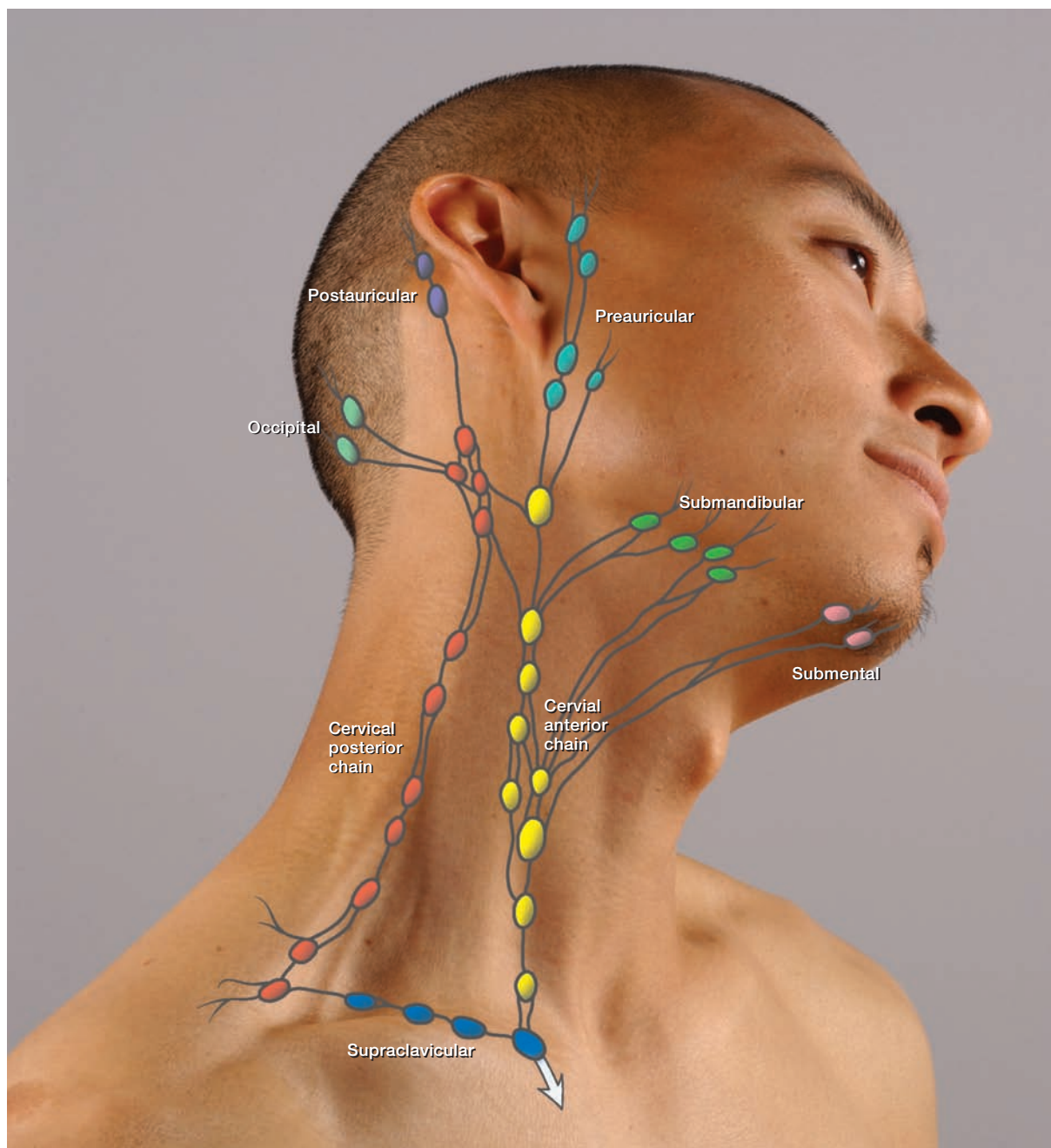


Figure 12-6. Location of the lymph nodes of the head and neck.

Salivary Glands

Salivary glands (Fig. 12-7) produce saliva and have ducts that release saliva into the mouth. Problems of the salivary glands include obstruction of the flow of saliva, inflammation, infection, and salivary gland tumors.

There are three main pairs of salivary glands:

- The **parotid glands** are the largest of the salivary glands. Each gland is located on the surface of the masseter muscle between the ear and the jaw.
- The **submandibular glands** sit below the jaw toward the back of the mouth.
- The **sublingual glands** are located under the tongue, beneath the mucous membrane of the floor of the mouth.

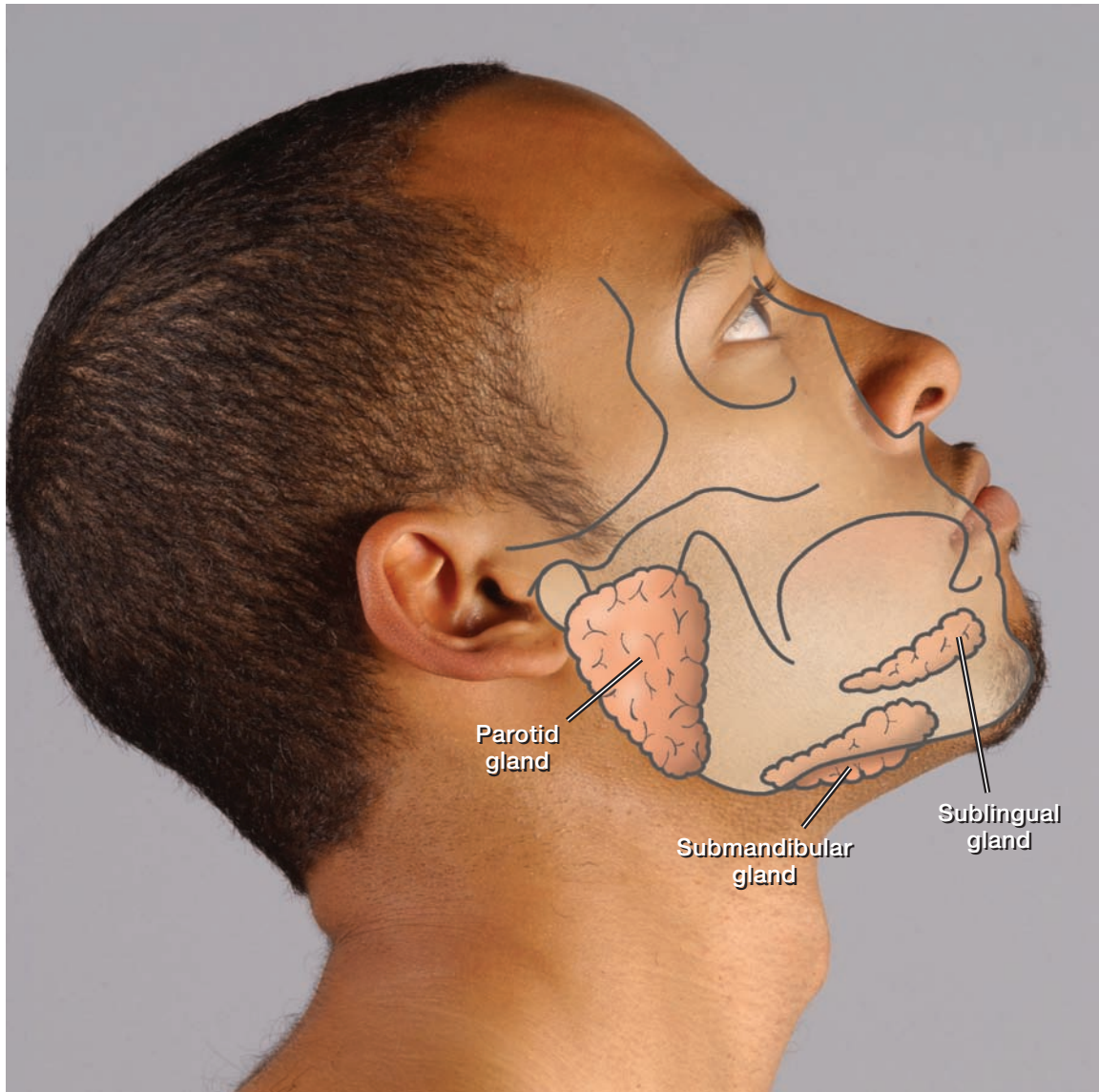


Figure 12-7. The salivary glands.

Thyroid Gland

The **thyroid gland** (*thigh-royd*), one of the endocrine glands, secretes thyroid hormone that controls the body's metabolic rate. The thyroid gland (Fig. 12-8) is located in the middle of the lower neck and is covered by layers of skin and muscles. It is situated below the larynx (voice box), over the trachea, and just above the clavicles (collarbones). The small 2-inch gland has a right and left lobe joined by a narrow isthmus, giving the gland the shape of a bow tie.

Disorders of the thyroid gland are very common, affecting millions of Americans. The most common disorders of the thyroid are an overactive or underactive gland. Examination of the thyroid is done to look at the size of the gland, as well as for **nodules** (lumps or masses). Normally the thyroid gland cannot be seen and can barely be felt, but if it becomes enlarged, it can be felt and it may appear as a bulge below or to the side of the Adam's apple (Figs. 12-9 and 12-10).

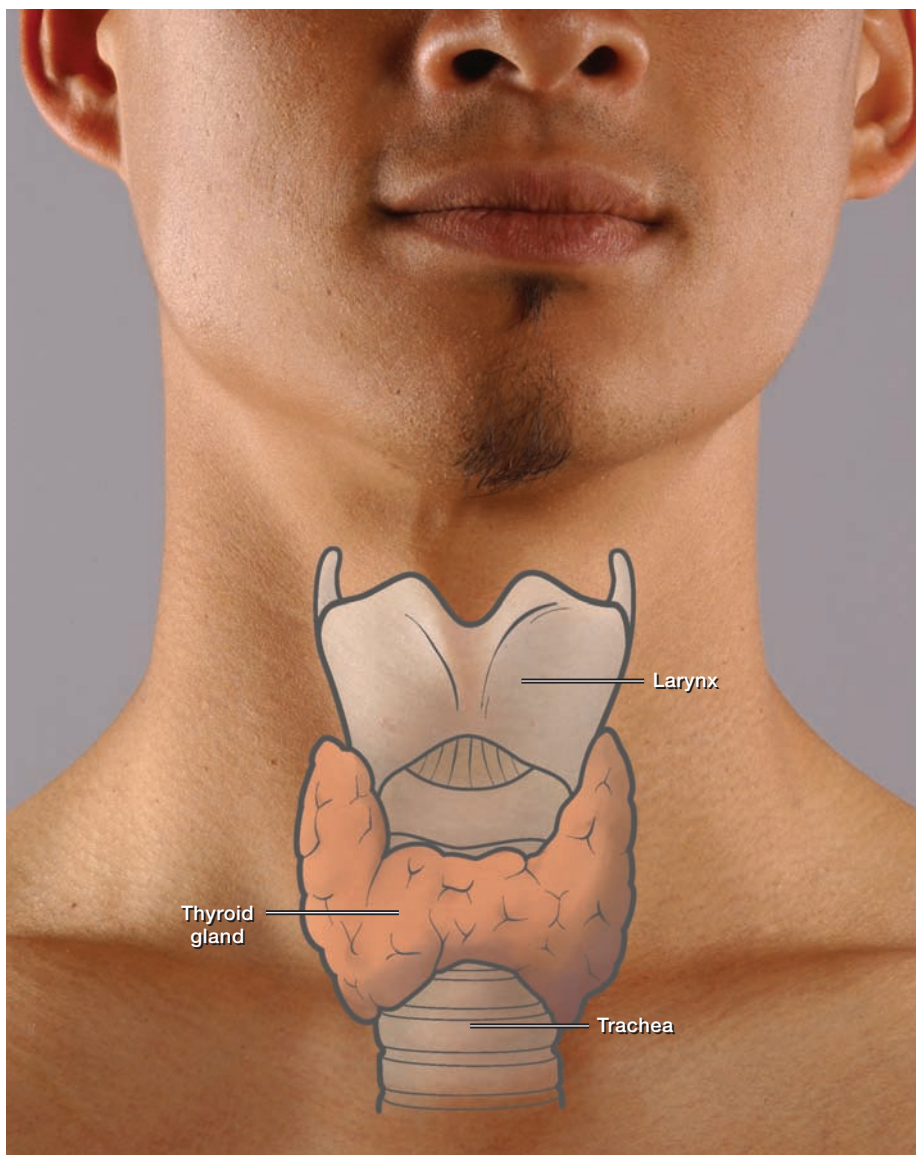


Figure 12-8. The thyroid and larynx. The thyroid gland is made up of two lobes that are connected by an isthmus and thus, has bow-tie-shaped appearance. A portion of each lobe lies behind the sternomastoid muscle.

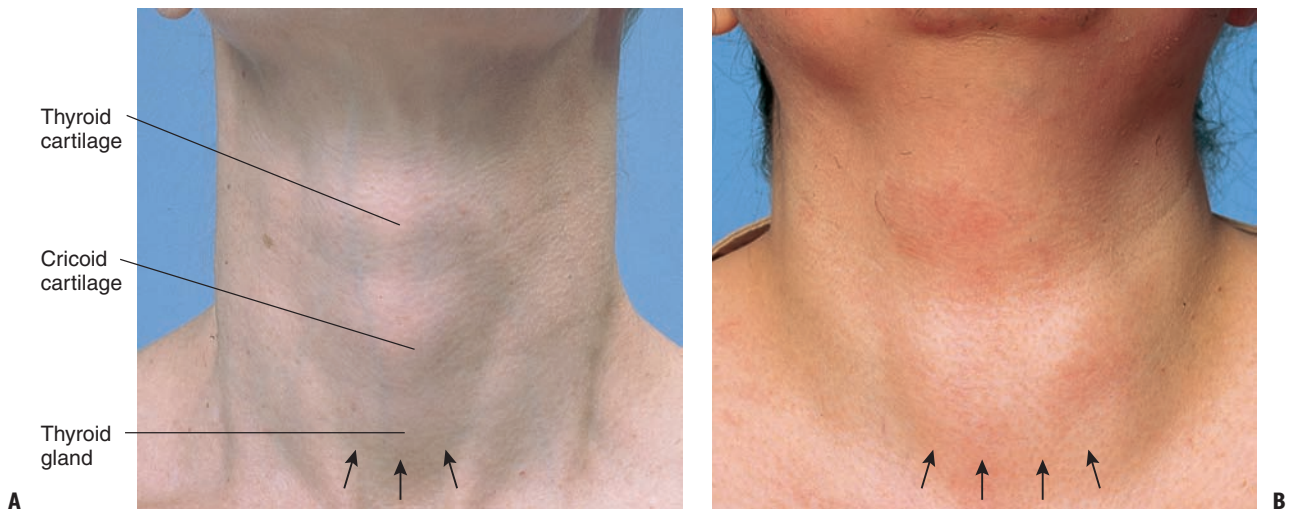


Figure 12-9. The thyroid gland at rest. (A) A normal thyroid gland. **(B)** An enlarged thyroid gland. **Goiter** is the term for an enlarged thyroid gland. (From Bickley LS, Szilagy P. *Bates' Guide to Physical Examination and History Taking*, 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2003.)



Figure 12-10. The thyroid gland during swallowing. (A) A normal thyroid gland during swallowing. **(B)** An enlarged thyroid—the enlarged gland is more evident as it rises during the act of swallowing. (From Bickley LS, Szilagy P. *Bates' Guide to Physical Examination and History Taking*, 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2003.)

Temporomandibular Joint

The **TMJ** is the joint that connects the mandible to the temporal bone at the side of the head. It is one of the most complicated joints in the body, allowing the jaw to open and close, move forward and backward, and from side to side. The joint contains a piece of cartilage called a disk that keeps the skull and the mandible from rubbing against each other. Temporomandibular disorders include problems with the joints, the muscles surrounding them, or both.



Figure 12-11. Lateral view of the temporomandibular joint. (Courtesy of *LifeART 2006* Lippincott Williams & Wilkins. All rights reserved.)

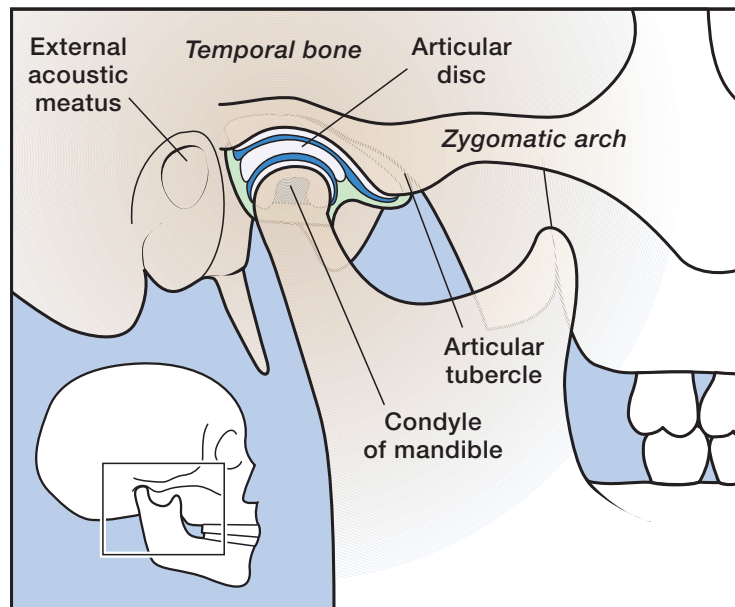


Figure 12-12. Anatomy of the temporomandibular joint.

SECTION 2 METHODS FOR EXAMINATION

EXAMINATION TECHNIQUES

Two primary examination techniques are inspection and palpation.

1. **Inspection** is a systematic visual examination of a patient's general appearance, skin, or a part of the body to observe its condition.
2. **Palpation** is the examination of a part of the body by using the fingertips to move or compress a structure against the underlying tissue. The most sensitive part of the hand—the fingertips—should be used for palpation.

Keys to Effective Examination Technique

1. **Consistent sequence.** The sequence for examination of the head and neck must be followed consistently with every patient so as not to accidentally skip an area or structure. The specific order can vary from clinician to clinician. It is most important, however, that once a clinician chooses a particular sequence, he or she keep the same sequence of examination every time to ensure thoroughness.
2. **Good palpation technique.** Correct palpation technique is critical to the success of a head and neck examination. Suggestions for effective palpation technique are listed in Box 12-1.
3. **Careful documentation.** All findings should be documented on the patient chart or computerized record. Documentation of unusual or abnormal findings with a camera is extremely helpful.

Box 12-1. Technique for Effective Palpation

1. To detect abnormalities such as swelling, tumors, or enlarged lymph nodes the structure being examined must be compressed against a firm, underlying structure or between the examiner's fingers.
2. To compress a structure against an underlying structure, use the fingertips to depress the structure being examined about 1/2 inch against the underlying tissue.
3. Depress the structure by applying consistent light pressure and a circular motion.
4. When ready to palpate another area, lift the fingers, move to the next area, and repeat the process by applying light, consistent pressure against the underlying tissue.
5. Incorrect palpation technique involves lightly "walking" or "dancing" the fingertips over a structure. This light dancing technique usually is unsuccessful in detecting nodules, tumors, swelling, or enlarged lymph nodes.
6. Rather than dancing your fingertips over a structure, use the fingertips to compress the structure against the underlying tissues using a circular motion.

COMPRESSION TECHNIQUES

To detect abnormalities such as swelling, tumors, or enlarged lymph nodes the structure being examined must be compressed against a firm structure or between the examiner's fingers.

Two basic compression techniques are employed during palpation:

1. Compressing the soft tissue between the examiner's fingertips
2. Compressing the soft tissue against underlying structures or tissues of the head or neck.

TABLE 12-1. Methods for Detecting Abnormalities

Compression Techniques



Figure 12-13.

Compression between the fingers of one hand—the technique of compressing the tissue between the fingers and thumb of the same hand.

Example: Compressing the sternomastoid muscle of the neck between the fingers and thumb.



Figure 12-14.

Compression between the fingers of both hands—the technique of compressing the tissues between the fingers of both hands in coordination to assess a structure.

Example: Using an index finger intraorally to compress the tissue of the buccal mucosa against the fingers of the extraoral hand.

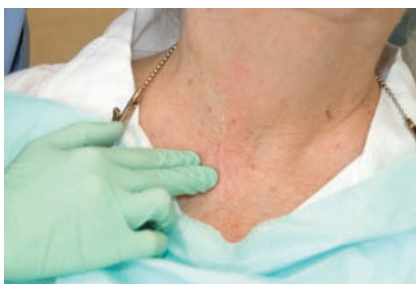


Figure 12-15.

Compression against an underlying structure—this technique uses one or two fingers to move or depress a structure against the underlying tissues.

Example: Using the fingers to compress the supraclavicular lymph nodes of the neck against the underlying tissues.

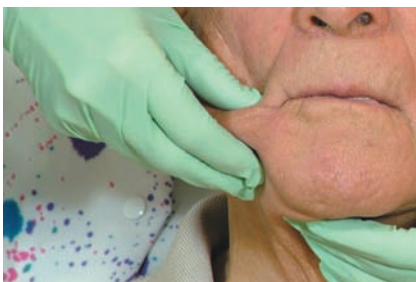


Figure 12-16.

Compression against and over an underlying structure—this palpation technique uses the fingertips to move or compress a structure against the underlying tissue.

Example: Using the fingers of the right hand to roll the tissue from under the chin up and over the inferior border of the mandible.

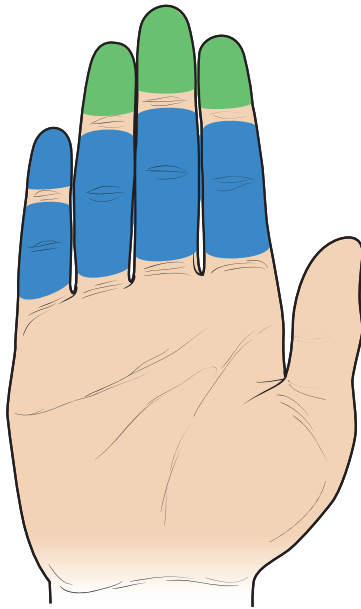


Figure 12-17. Fingertips. The sensitive palmar surfaces of the fingertips (shown in green) are used to palpate structures of the head, neck, and oral cavity.

Palpation Expectations

In health, the lymph nodes, salivary glands, and thyroid rarely are detectable by palpation. For this reason, many beginning clinicians express concern saying, “But I don’t feel anything.”

- Palpating the structures of the head and neck can be likened to our observations in everyday life.
- Think about the skin on your arm. When touched, the skin on an arm is smooth, even, soft, and intact. This is the normal finding.
- If the arm is stung by a bee, however, there will be a red, raised welt on the skin. The area of the sting is swollen, tender, and warm to the touch. The welt is an example of an abnormal finding.
- Thus an infected, injured, or diseased structure—like a lymph node—may be palpable when normally it is not detectable.

TABLE 12-2. Findings Detected by Palpation

Quality	Characteristics to Determine
Surface	Smooth or rough Flat or a raised knob, lump, or swelling
Shape	Irregular, round, oval
Consistency	Firm, hard, or spongy
Mobility	Mobile (moves independently of the underlying structure) Fixed (not freely mobile; stuck to underlying structures)
Tenderness	Amount of tenderness, if any, experienced by the patient when the structure is palpated

SECTION 3 PEAK PROCEDURE

The head and neck examination involves the inspection and palpation of the structures of the head and neck. It is helpful to organize the structures to be examined into four subgroups:

1. Overall appraisal of head, neck, face, and skin
2. Lymph nodes of the head and neck
3. Salivary and thyroid glands
4. The TMJ

Subgroup 1: Overall Appraisal of Head, Neck, Face, and Skin

TABLE 12-3. Overall Appraisal: What Can I Expect to Feel?

Normal findings	• The face and neck appear symmetrical • The skin is intact and of uniform color • There is an even distribution of hair on the scalp
Notable findings	• Lesions or color changes of the skin • Uneven pattern of hair loss • Lesions • Masses in the neck • Wounds, bruises, scars • Swelling of the face or neck • Asymmetry of the face or neck Remember to request information from the patient. The patient will have valuable information about the duration and possibly know the cause of any notable findings, such as a scar due to injury or surgery.

Procedure 12-1. Head and Neck Examination**EQUIPMENT:**

Gloves and optional overgloves

Small cup of water for patient use during thyroid exam

SUBGROUP 1: OVERALL APPRAISAL OF HEAD, NECK, FACE, AND SKIN**ACTION****RATIONALE**

1. General Appraisal. While seating and chatting with the patient, unobtrusively inspect the skin and facial symmetry of the face and neck.

If problems are detected, question the patient about the onset, duration, and possible causes of any surface variations of the skin, such as lesions or scars.



Figure 12-18.

- | | |
|--|---|
| <ol style="list-style-type: none"> 2. Preparation and Positioning. Position the patient in an upright, seated position. The patient should support his or her head in an upright position rather than resting it against the headrest.

Ask the patient to remove eyeglasses and loosen clothing that limits examination of the neck. Wash and dry hands, don gloves.

Donning overgloves at this time is optional. | <ul style="list-style-type: none"> • An upright head position makes the structures of the neck stand out for easier examination. • The height of the patient's chair should be positioned so that the clinician can easily reach all the structures to be examined. • Gloves prevent direct contact with open wounds, cuts, sores, or contagious skin conditions. • Donning overgloves at this time facilitates moving directly from the head and neck examination to the intraoral examination. The overgloves are removed before proceeding to the intraoral examination. |
| <ol style="list-style-type: none"> 3. Provide Information. Briefly explain the examination procedure to the patient. | <ul style="list-style-type: none"> • Reduces patient apprehension and encourages patient cooperation. |
| <ol style="list-style-type: none"> 4. Head, Scalp, and Ears. Change your position so that you are standing directly behind the patient. Visually inspect the head and scalp for any abnormalities. Inspect the ears. | <ul style="list-style-type: none"> • Lesions and head lice are common conditions that may be detected on the skin and scalp of the head. • The ears are common sites for lesions, such as basal cell carcinoma. |

(continued)

Subgroup 2: Lymph Nodes of the Head and Neck

TABLE 12-4. Lymph Nodes: What Can I Expect to Feel?

Normal findings	• Lymph nodes are usually not detectable • No tenderness
Notable findings	Infected lymph nodes: • Firm • Tender • Enlarged and warm • Bilateral (on both sides of the head) • Freely moveable from underlying structures • Feel a bit like a swollen grape • Following an infection, lymph nodes occasionally remain permanently enlarged; these will be small (less than 1 cm), nontender, with a rubbery consistency. Malignancies: • Firm • Nontender • Matted (stuck to each other) • Fixed (stuck to underlying tissue) • Unilateral (only enlarged on one side)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK**

A. Occipital Lymph Nodes. The occipital nodes are located at the base of the skull.

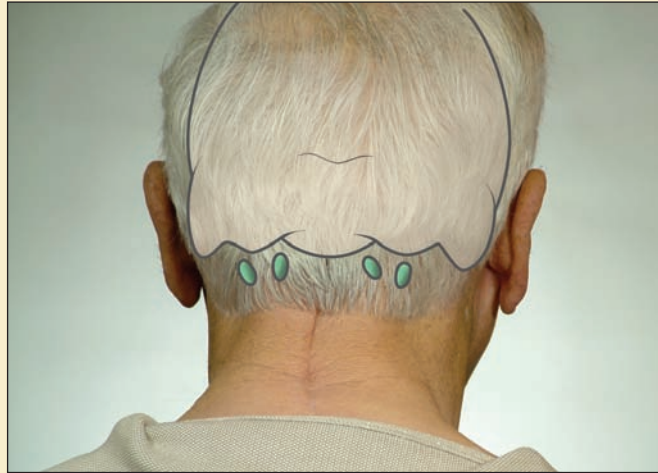


Figure 12-19.



Figure 12-20.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Ask the patient to tip the head forward slightly. If applicable, the patient can assist by holding up long hair so that the neck is fully visible to the examiner.
3. **Palpation technique**
 - Position your fingertips at the base of the skull.
 - Begin at the midline of the neck, working outward along the hairline until the sternomastoid muscle is reached.
 - Use circular motions with your fingertips to compress the tissues against the base of the underlying bone.
 - Cover the area slightly above and below the hairline because the location of lymph nodes varies among patients.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK**

B. Posterior Auricular Lymph Nodes. The posterior auricular nodes are located behind each ear.

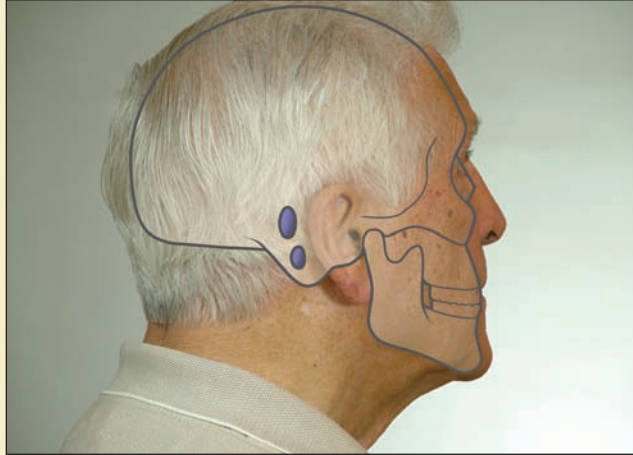


Figure 12-21.



Figure 12-22.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in an upright position. If applicable, the patient can assist by holding up long hair so that the neck is fully visible to the examiner.
3. **Palpation technique**
 - **Inspect each ear separately, beginning with the right ear.**
 - Displace the right ear forward to visually inspect the back of the ear and the skin behind the ear. The ears are common sites for lesions, such as basal cell carcinoma.
 - Palpate the posterior auricular nodes using steady, gentle circular motions with your fingertips to compress the tissues against the bone of the patient's skull.
 - Repeat this procedure to examine the back of the left ear and the skin behind it.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK**

C. Preauricular Lymph Nodes. The preauricular nodes are located in front of the ears.

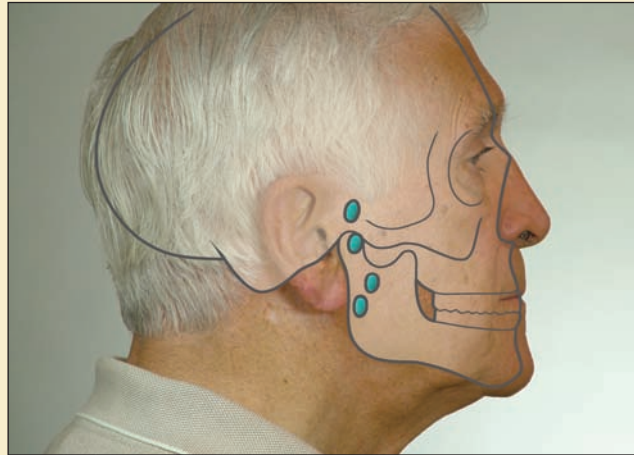


Figure 12-23.

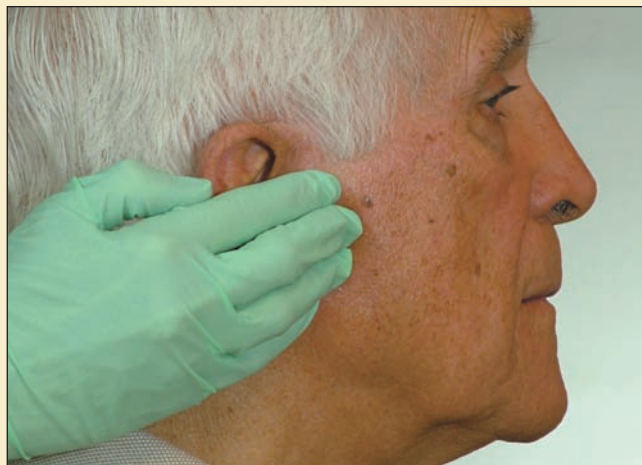


Figure 12-24.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in an upright position.
3. **Palpation technique**
 - Palpate the preauricular nodes using steady, gentle circular motions with your fingertips against the underlying bone.
 - Note tender or enlarged lymph nodes.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK**

D. Submental Lymph Nodes. The submental nodes are located under the jaw on either side of the midline of the mandible.

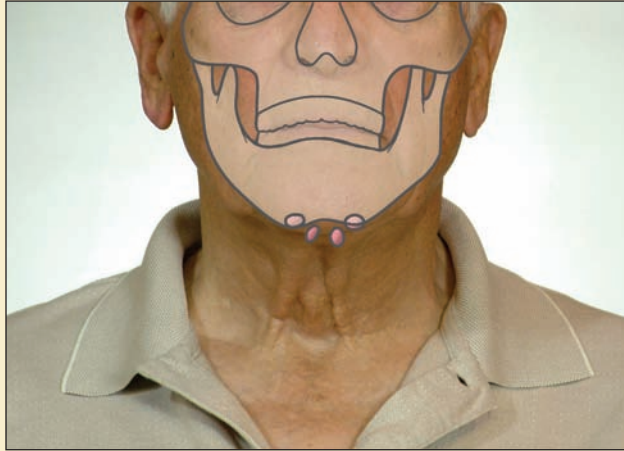


Figure 12-25.



Figure 12-26.

1. **Your position.** Stand behind or to the side of the patient.
2. **Patient's position.** Head in upright position.
3. **Palpation technique**
 - Use your thumb and index finger to compress the area behind and beneath the symphysis (midline area) of the mandible.
 - Note tender or enlarged nodes.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK**

E. Submandibular Lymph Nodes. The submandibular nodes are under the jaw, along the side of the mandible.

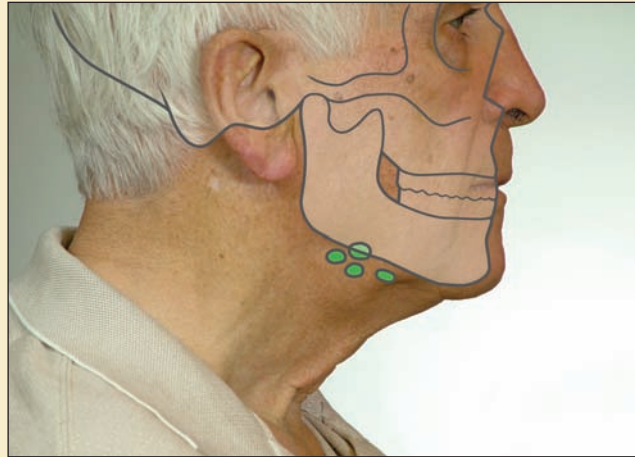


Figure 12-27.



Figure 12-28.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in upright position.
3. **Palpation technique**
 - Begin with the submandibular nodes on the right side of the head.
 - To facilitate palpation, use your **left hand as a stabilizing hand** to move the tissue under the chin toward the right side of the neck. Moving the tissue toward the right side assists the examiner in rolling the tissue over the right side of the mandible.
 - Your right hand is used for palpation. Cup your fingers under the chin; roll the tissue up and over the inferior border of the mandible. Keeping the fingertips in place, allow the tissue to slowly slide down over the mandible, back into normal position. As the tissue moves over the mandible, you can detect enlarged nodes.
 - Examine the submandibular nodes on the left side of the jaw, using a similar procedure.

(continued)

Procedure 12-1. Head and Neck Examination (continued)

SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK

F. Cervical Lymph Nodes Medial to Muscle. The anterior chain of cervical lymph nodes lies above the sternomastoid muscle.

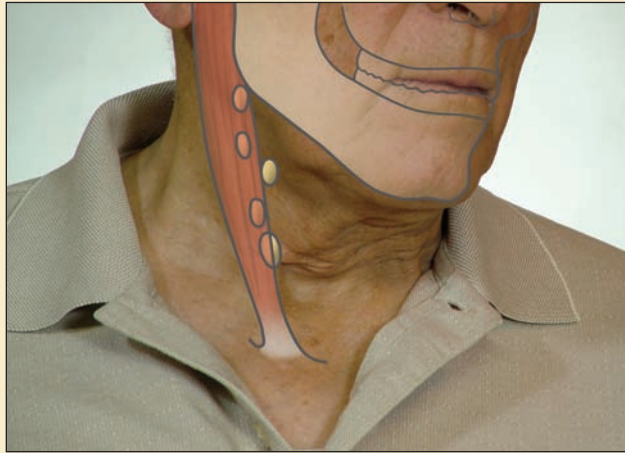


Figure 12-29.



Figure 12-30.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Ask the patient to tip the chin down slightly and turn the head to the left. This position makes the sternomastoid muscle stand out. Support the patient's chin with your left hand.
3. **Palpation technique**
 - Palpate the cervical nodes medial to the sternomastoid muscle, beginning with those on the right side of the neck.
 - With your **right hand**, grasp the body of the muscle between your fingertips and thumb.
 - Rotate your fingertips back and forth over the muscle, covering its entire length from behind the ear to the clavicle.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK**

G. Cervical Lymph Nodes Posterior to Muscle. The posterior chain of cervical lymph nodes lie beneath and posterior to the sternomastoid muscle.

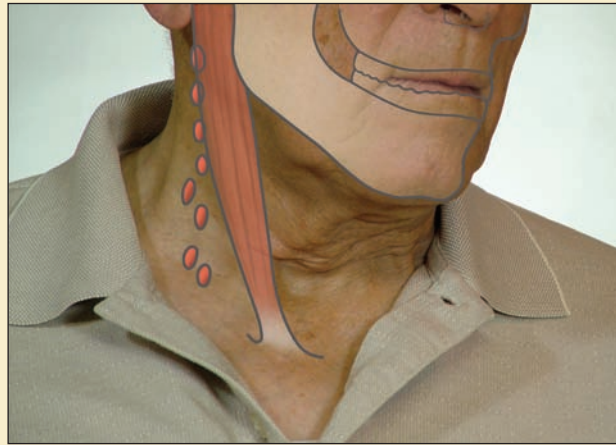


Figure 12-31.



Figure 12-32.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Ask the patient to maintain the same head position as when palpating the lymph nodes medial to the muscle.
3. **Palpation technique**
 - Begin by palpating the nodes on the right side of the neck.
 - Palpate the nodes by positioning the fingertips of your index and middle fingers under (behind) the muscle and applying gentle compression against the underlying tissues along the entire length of the muscle from behind the ear to the clavicle.
 - Repeat this procedure to examine the cervical nodes medial and posterior to the sternomastoid muscle on the left side of the neck.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 2: LYMPH NODES OF THE HEAD AND NECK**

H. Supraclavicular Lymph Nodes. The supraclavicular nodes are located in the angle formed between the sternomastoid muscle and the clavicle.

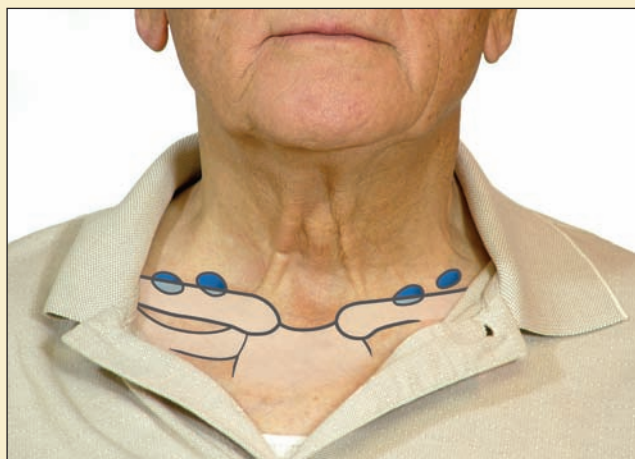


Figure 12-33.



Figure 12-34.

1. **Your position.** Stand to the side or behind the patient.
2. **Patient's position.** Ask the patient to face forward with the chin tipped slightly downward. This position facilitates palpation by relaxing the muscles in the neck.
3. **Palpation technique**
 - Place your index and middle fingers above the clavicle on the right side of the neck and apply circular compression.
 - Palpate the supraclavicular nodes on the left side using the same technique.

Subgroup 3: Salivary and Thyroid Glands

TABLE 12-5. Salivary and Thyroid Glands: What Can I Expect to Feel?

Normal findings	Usually not detectible; no tenderness
Notable findings	Salivary glands: • Swollen or enlarged • Firm, hard consistency • Tender to palpation Thyroid gland: • Palpable gland • Deviates from the midline of the neck • Asymmetrical lobes • Enlarged lobes, diffuse enlargement; irregular borders • Nodules present • Hard, firm consistency • Fixed to underlying structures

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 3: SALIVARY AND THYROID GLANDS**

A. Parotid Glands. The parotid gland is located between the ear and the jaw.

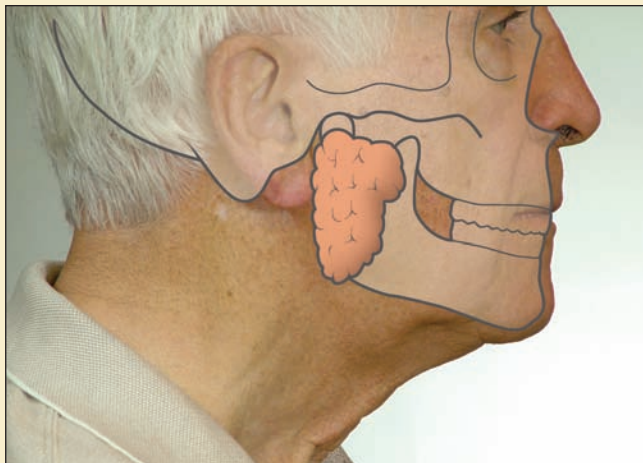


Figure 12-35.

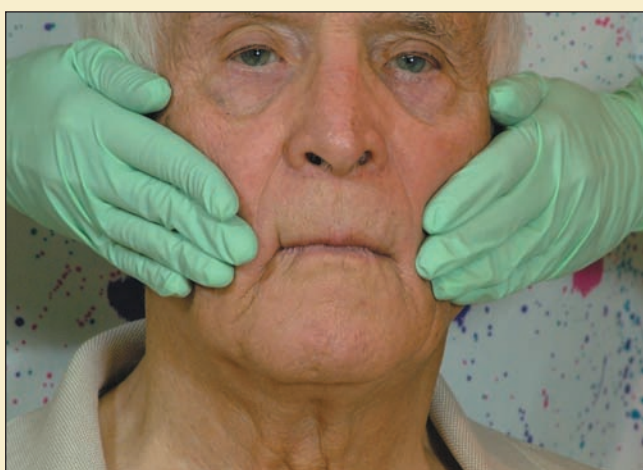


Figure 12-36.

1. **Your position.** Stand behind or slightly to the side of the patient.
2. **Patient's position.** Head in upright position.
3. **Palpation technique**
 - Place the palms of your hands in front of the ears with your fingers extending the full length of the cheek so that you can palpate the entire gland.
 - Use circular compression to compress the tissue against the cheekbones.
 - A normal parotid gland is difficult to detect by palpation, however, an enlarged gland or nodules in the gland are palpable.
 - Pain or tenderness may be related to salivary stones, inflammation, or cancer.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 3: SALIVARY AND THYROID GLANDS**

B. Submandibular Glands—Locate. The submandibular gland sits below the jaw toward the back of the mouth.

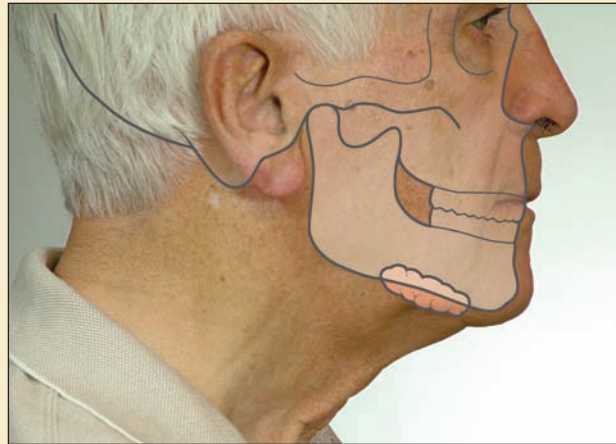


Figure 12-37.



Figure 12-38.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in upright position.
3. **Locate the submandibular gland**
 - Locate the submandibular salivary glands by placing your index fingers near the angle of the mandible and then moving forward along the mandible to locate the slight depression in the inferior border of the mandible—the **antegonial notch**.
 - Continue to the next page for the palpation technique for the submandibular glands.

(continued)

Procedure 12-1. Head and Neck Examination (continued)

SUBGROUP 3: SALIVARY AND THYROID GLANDS

C. Submandibular Glands—Palpate.

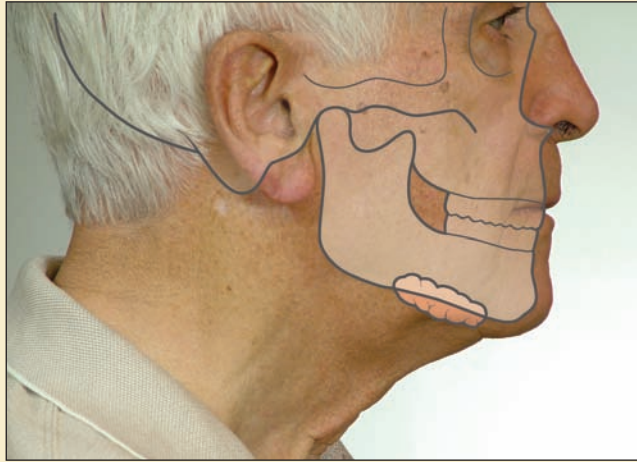


Figure 12-39.



Figure 12-40.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in upright position.
3. **Palpation technique**
 - Move your fingers under the jaw to locate the gland on both sides of the head.
 - Ask the patient to press the tip of his or her tongue against the roof of the mouth. This causes the mylohyoid and tongue muscles to tense, making it easier to palpate the submandibular glands.
 - Bilaterally compress the glands upward against the tensed muscles.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 3: SALIVARY AND THYROID GLANDS**

D. Thyroid Gland—Locate. The thyroid gland is located in the middle of the lower neck. It is situated below the larynx, over the trachea and just above the clavicles.



Figure 12-41.



Figure 12-42.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in upright position.
3. **Locate the thyroid gland**
 - Find the thyroid cartilage (the Adam's apple) at the midline of the neck. The thyroid gland lies approximately 2 to 3 cm below the thyroid cartilage.
 - Give the patient a cup of water and ask him or her to swallow as you watch this region. The thyroid gland, along with the adjacent structures, will move up and down with swallowing.
 - The normal thyroid is not visible, so observing the neck during swallowing is helpful in locating the gland. Once you have located the gland, you are ready to palpate it.
 - **Continue to the next page for the palpation technique for the thyroid gland.**

(continued)

Procedure 12-1. Head and Neck Examination (continued)

SUBGROUP 3: SALIVARY AND THYROID GLANDS

E. Thyroid Gland—Palpate Right Lobe.



Figure 12-43.



Figure 12-44.

1. **Your position.** Stand behind the patient and position your hands with thumbs on the nape of the neck.
2. **Patient's position.** Ask the patient to tilt the head slightly to the right. This relaxes the neck muscles for easier palpation.
3. **Palpation technique.** Begin with the right lobe of the gland.
 - Use your **left hand as a stabilizing** hand to displace the trachea slightly to the right.
 - Use your right hand for palpation. Position your fingers between the Adam's Apple and the sternomastoid muscle. Rest your fingers *lightly* in a stationary position.
 - Ask the patient to take a sip of water and swallow, as the fingers of your right hand rest lightly on the neck. The gland slides beneath your fingers as it moves up and down during swallowing. Repeat this process several times.
 - A normal gland is undetectable or barely detectable. Do not be disappointed if you do not identify the gland. If the gland is detectable, this is a notable finding.
 - Repeat a similar maneuver to examine the left lobe of the thyroid gland.

Subgroup 4: Temporomandibular Joint

TABLE 12-6. Temporomandibular Joint: What Can I Expect to Feel?

Normal findings	• Smooth motions as the jaw is moved • Symmetrical movement
Notable findings	• Abnormal sounds (popping, clicking) • Grating sensations as the jaw opens and closes • Asymmetrical movements • Limited range of movement • Tenderness or pain reported by the patient

Procedure 12-1. Head and Neck Examination (continued)

SUBGROUP 4: TEMPOROMANDIBULAR JOINT

A. TMJ—Locate.



Figure 12-45.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in upright position.
3. **Locate the TMJ**
 - Locate the joints by placing your index fingers just in front of the tragus of each ear.
 - Ask the patient to open and close the mouth. As the mouth is opened, your fingertips should drop into the joint spaces.
 - Continue to the next page for directions on palpating the TMJ.

(continued)

Procedure 12-1. Head and Neck Examination (continued)

SUBGROUP 4: TEMPOROMANDIBULAR JOINT

B. TMJ—Palpate.



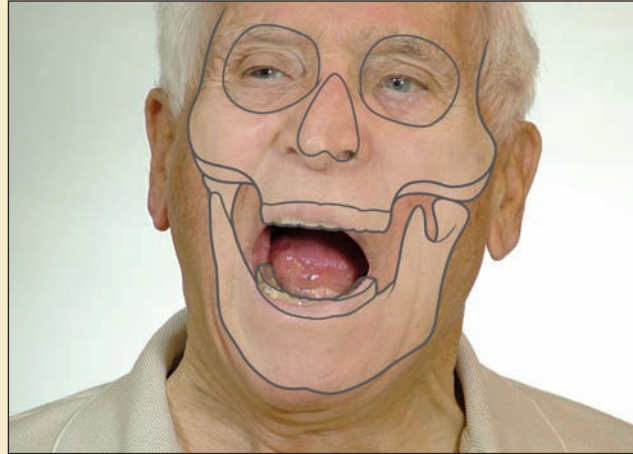
Figure 12-46.



Figure 12-47.

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in upright position.
3. **Palpation technique**
 - Place your fingertips over the joints. Palpate the joints as the patient slowly opens and closes several times.
 - Note any deviations during opening.
 - Continue to the next page for directions on palpation during lateral excursions.

(continued)

Procedure 12-1. Head and Neck Examination (continued)**SUBGROUP 4: TEMPOROMANDIBULAR JOINT****C. TMJ—Lateral Excursions (Side-to-Side Movements of the Jaw).****Figure 12-48.****Figure 12-49.**

1. **Your position.** Stand behind the patient.
2. **Patient's position.** Head in upright position.
3. **Palpation technique**
 - Maintaining your hands in the same position, ask the patient to open slightly and move the lower jaw laterally to the right.
 - Repeat this maneuver, with the patient moving the lower jaw to the left.
 - Finally, ask the patient to protrude the lower jaw forward.
 - Listen for abnormal sounds, such as popping or clicking.

(continued)

Procedure 12-1. Head and Neck Examination (continued)

SUBGROUP 4: TEMPOROMANDIBULAR JOINT

D. Optional: TMJ—Range of Motion.



Figure 12-50.



Figure 12-51.

Assessment of the range of motion is optional, based on notable findings from the TMJ assessment.

- Assess normal range of motion by asking the patient to place the index, middle, and ring fingers between the incisal edges of the upper and lower incisors. The patient's own fingers are proportional to his/her jaw and are a good indication of adequate range of motion.

E. Document. Document all notable findings in the patient chart or computerized record.

SECTION 4 READY REFERENCES

Ready Reference 12-1. Internet Resources for Information Gathering

<http://www.cancer.gov/cancerinformation/cancertype/headandneck>

The website of the **National Cancer Institute** has a wealth of information on head and neck cancer.

<http://www.cancer.gov/dictionary>

The National Cancer Institute's **Dictionary of Cancer Terms**, which contains more than 3,500 terms related to cancer and medicine.

http://cis.nci.nih.gov/fact/6_37.htm

The National Cancer Institute's **Head and Neck Cancer: Questions and Answers**.

<http://www.nohic.nidcr.nih.gov/pdfs/OralCancerExam.pdf>

This site provides access to an excellent PDF version of a patient brochure—*The Oral Cancer Exam*—explaining the oral cancer examination. The brochure is not copyrighted so you can make as many copies as you like for distribution to patients. Additional copies also are available by calling the National Oral Health Information Clearinghouse at 301-402-7364.

<http://www.health.gov/nhic/>

The **National Health Information Center (NHIC)** is a health information referral service. NHIC puts health professionals and consumers who have health questions in touch with those organizations that are best able to provide answers.

<http://www.headandneck.org/smoking.htm>

The **Yul Brynner Head and Neck Cancer Foundation** has information on smoking and cancer facts and the dangers of smokeless tobacco.

http://www.mdanderson.org/diseases/head_neck/

The website of **MD Anderson Cancer Center**, a leading head and neck cancer facility, has information on head and neck cancer and tobacco and cancer.

<http://www.mskcc.org/mskcc/html/338.cfm>

The website of **Memorial Sloan-Kettering Cancer Center**, a leading head and neck cancer facility, has information on the risk factors, prevention, symptoms, and early detection of head and neck cancer.

<http://www.mskcc.org/mskcc/html/420.cfm>

The website of **Memorial Sloan-Kettering Cancer Center** has information on skin cancer and melanoma, basal cell carcinoma, and squamous cell carcinoma.

http://www.oralcancerfoundation.org/dental/slide_show.htm

Oral pathology images on the Oral Cancer Foundation website. This collection of photographs contains cancers and noncancerous diseases of the oral environment that may be mistaken for malignancies. Some contain a brief patient history that may add insight to the actual diagnosis of the disease. As you review these images and their descriptions, you will be presented with what the referring doctor originally diagnosed and treated the patient for. Clicking on the diagnosis button will reveal the actual results of biopsy.

<http://www.oralcancerfoundation.org/tobacco/index.htm>

The website of the **Oral Cancer Foundation** has information on the connection of tobacco and cancer.

<http://www.nlm.nih.gov/medlineplus/oralcancer.html>

The **MEDLINE Plus** website has a wealth of information on head and neck cancer.

SUGGESTED READINGS

Mashberg A, Meyers H. Anatomical site and size of 222 early asymptomatic oral squamous cell carcinomas: a continuing prospective study of oral cancer. II. *Cancer* 1976;37:2149–2157.

Silverman S Jr. Demographics and occurrence of oral and pharyngeal cancers. The outcomes, the trends, the challenge. *J Am Dent Assoc* 2001;132(suppl):7S–11S.

Slater S. Palpation of the thyroid gland. *South Med J* 1993;86:1001–1003.

SECTION 5 THE HUMAN ELEMENT

Box 12-2. Through the Eyes of a Patient

About 10 years ago, while I was pregnant with my first child, my mother urged me to go and have the small brown spot above my upper lip checked by a doctor. At the time, I was excited and busy getting ready for my first child and I decided that the brown spot was just like a beauty mark. I knew that it had appeared only about a year ago, but I did not want to worry about it. After all, I saw my obstetrician each month and I had just had a dental examination last month. Surely, my doctor or my dentist would have noticed the brown spot above my lip and told me if it was a problem—wouldn't they?

Well, finally, because my mother just insisted, I went to see my regular doctor to ask about the brown “beauty” mark. I was shocked when he wanted to remove the spot and send it off to the laboratory. The test results showed that the brown spot was cancer and I had to have additional surgery to make sure that all the cancer cells had been removed.

Six years ago, I went back to school and became a dental hygienist. Today, as a dental hygienist, I stress the importance of a yearly head, neck, and oral cancer examination to all my patients. My experience made me so aware that many health professionals have tunnel vision. My obstetrician concentrated on my pregnancy. My dentist looked at my teeth but did not look up an inch to notice the brown spot above my upper lip. As future dental health care providers, I strongly urge you to remember that doing a cancer examination and following up on any changes could save a patient's life.

Cathy, R.D.H
Cancer survivor

TABLE 12-7. English to Spanish Phrase List for Head and Neck Examination

Next, I will do a head and neck examination.	Ahora voy hacer una examinacion de la cabeza y el cuello.
Just relax. This examination is not painful and takes only a few minutes.	No tenga miedo. La examinacion no duele, y solamente toma unos minutos.
At any time during the examination, please tell me if any area is tender.	Ha cualquier tiempo durante la examinacion, por favor digame si tiene algun area que es sensible.
Please tilt your head forward (back).	Por favor incline su cabeza hacia delante. Por favor incline su cabeza para atras.
Please turn your head to the right (left).	Por favor vuelta su cabeza para la derecha. Por favor vuelta su cabeza para la izquierda.
Please tilt your head to the right (left).	Por favor incline su cabeza para la derecha. Por favor incline su cabeza para la izquierda.
Please look straight ahead.	Por favor mire ha el frente.
I will check the lymph nodes in your head and neck.	Voy ha examinar las glandulas tiroides en su cabeza y cuello.
The lymph nodes are part of the body's defenses; they act as a filtering system to remove bacteria and viruses from your system.	Las gladulas tiroides son parte de las defensas naturales de el cuerpo; estas filtran fluidos en el cuerpo y protegen contra bacterias y virus.
Please press your tongue against the roof of your mouth.	Por favor aprete su lengua contra el techo de la boca.
Now, I will check your salivary glands.	Ahora voy ha examinar la glandula de saliva.
Next, I will check your thyroid gland.	Ahora voy ha examinar la glandula.
Please take a sip of water and hold it in your mouth. Please swallow.	Tome un poco de agua y aguantela en su boca. Por favor trage.
Now, I will check the joint in your jaw.	Ahora examinare la articulacion de la mandibula.
Please slowly open and close your mouth.	Por favor abra y ciere su boca, pero despacio.
Please move your lower jaw to the right (left).	Por favor vuelta la mandibula a la derecha. Por favor vuelta la mandibula a la izquierda.
Several of your lymph nodes are swollen. Have you been ill or had an infection?	Varios de sus glandulas tiroides estan hinchadas. ¿Ha estado enfermo or ha tenido alguna infeccion?

(continued)

TABLE 12-7. English to Spanish Phrase List for Head and Neck Examination

Everything looks (feels) fine.	Todo luce (se siente) bien.
Your _____ is swollen.	Su _____ esta hinchado.
I am concerned about this area on your skin.	Estoy preocupado por esta area de su piel.
Do you spend much time outside in the sun?	¿Usted pasa mucho tiempo afuera en el sol?
How long have you had this spot on your skin?	¿Hace mucho tiempo que tiene esta mancha en su piel?
How did you get this scar?	¿Como recibio esta cicatriz?
Does anyone in your family have thyroid problems?	¿Algun miembro de su familia ha tenido problemas con tiroides?
Does your jaw ever bother you?	¿Le ha molestado la mandibula ha algun tiempo?
Do you have frequent headaches?	¿Usted tiene dolores de la cabeza con frecuencia?
Does your mouth ever lock in the open position?	¿Se le ha atascarse la boca en posicion abierta?
I am concerned about this area and would like to have it examined by a physician/specialist.	Estoy preocupado sobre esta zona, y quiero que sea examinada por un medico/especialista.
Do you have a physician that you see regularly?	¿Usted tiene un medico personal?
Here are the names of several physicians/ specialists in our area.	Aqui tiene nombres de varios medicos/ especialistas en esta area.
I can set up an appointment with the specialist of your choice.	Yo le puedo hacer una cita con el especialista de su preferencia.
I will write a note to the specialist explaining my concerns.	Le voy ha escribir una nota ha el especialista para explicarle la preocupacion.
I am going to get my clinic instructor.	Voy ha buscar a mi instructor.

SECTION 6 PRACTICAL FOCUS—FICTITIOUS PATIENT CASES

DIRECTIONS:

- The photographs in this section show the findings from the head and neck examination of patients A–E. Refer to previous modules to refresh your memory regarding each patient's health history and vital signs, as there may be a connection between the patient's systemic health status or habits and the findings from the head and neck examination.
- Use the [Lesion Descriptor Worksheet](#) to develop descriptions for the notable findings of patients A–E.
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.

Sources of Clinical Photographs

The author gratefully acknowledges the sources of the following clinical photographs in the Practical Focus Section of this module.

- Figure 12-52. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 12-54. Image provided by Stedman's.
- Figure 12-56. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 12-58. Dr. Richard Foster, Guilford Technical Community College Jamestown, NC.
- Figure 12-60. Image provided by Stedman's.

FICTITIOUS PATIENT CASE A: Mr. Alan Ascari**Figure 12-52.**

Lesion Descriptor Worksheet

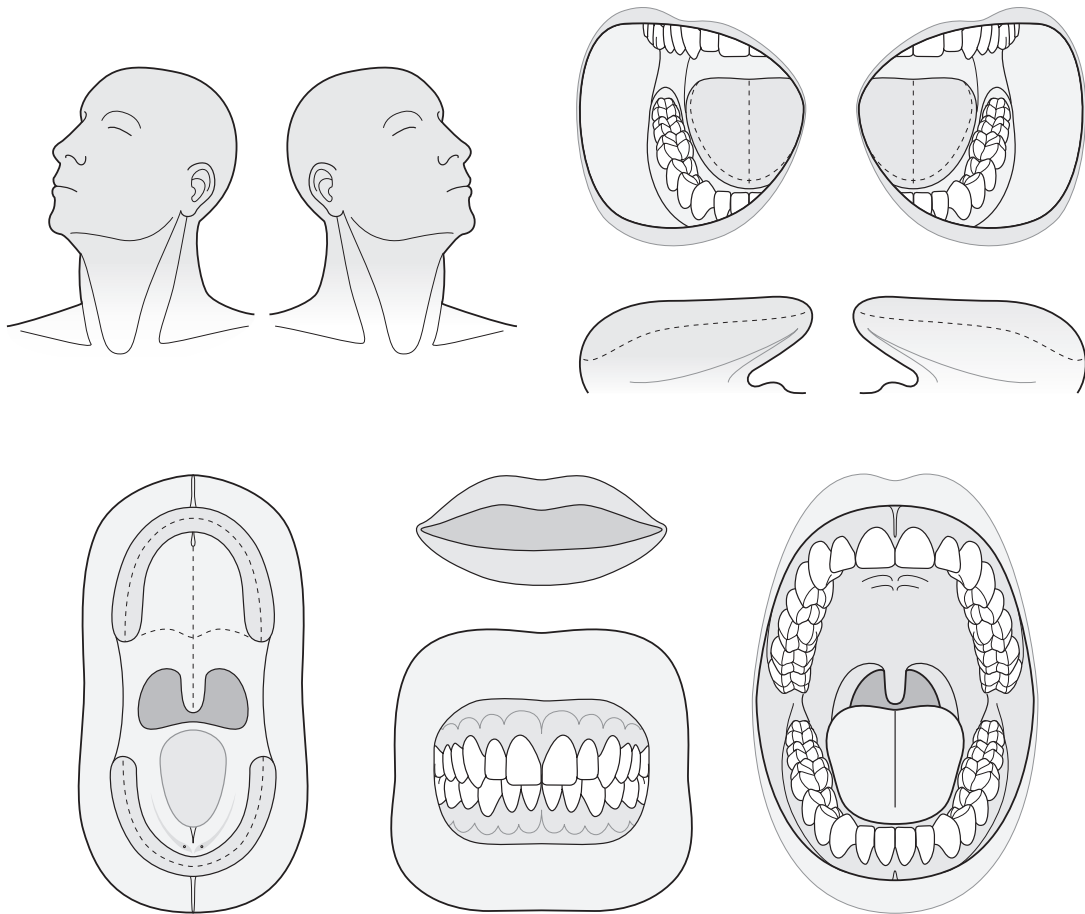
Directions: Highlight or circle the applicable descriptors

(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermilion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
(B) Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
(C) Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
(D) Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
(T) T y p e	Nonpalpable Flat Lesions <i>Macule</i> - Flat discolored spot, less than 1 cm in size <i>Patch</i> - Flat discolored spot, larger than 1 cm in size Palpable, Elevated, Solid Masses <i>Papule</i> - Solid raised lesion, less than 1 cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1 cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1 cm in diameter <i>Wheal</i> - Localized area of skin edema Fluid-Filled Lesions <i>Vesicle</i> - Small blister filled with clear fluid, less than 1 cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1 cm in diameter <i>Pustule</i> - Small raised lesion filled with pus Loss of Skin or Mucosal Surface <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 12-53A. Page 1 of Lesion Descriptor Worksheet for Mr. Ascari.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 12-53B. Page 2 of Lesion Descriptor Worksheet for Mr. Ascari.

FICTITIOUS PATIENT CASE B: Miss Bethany Biddle



Figure 12-54. Finding on left ear.

Lesion Descriptor Worksheet

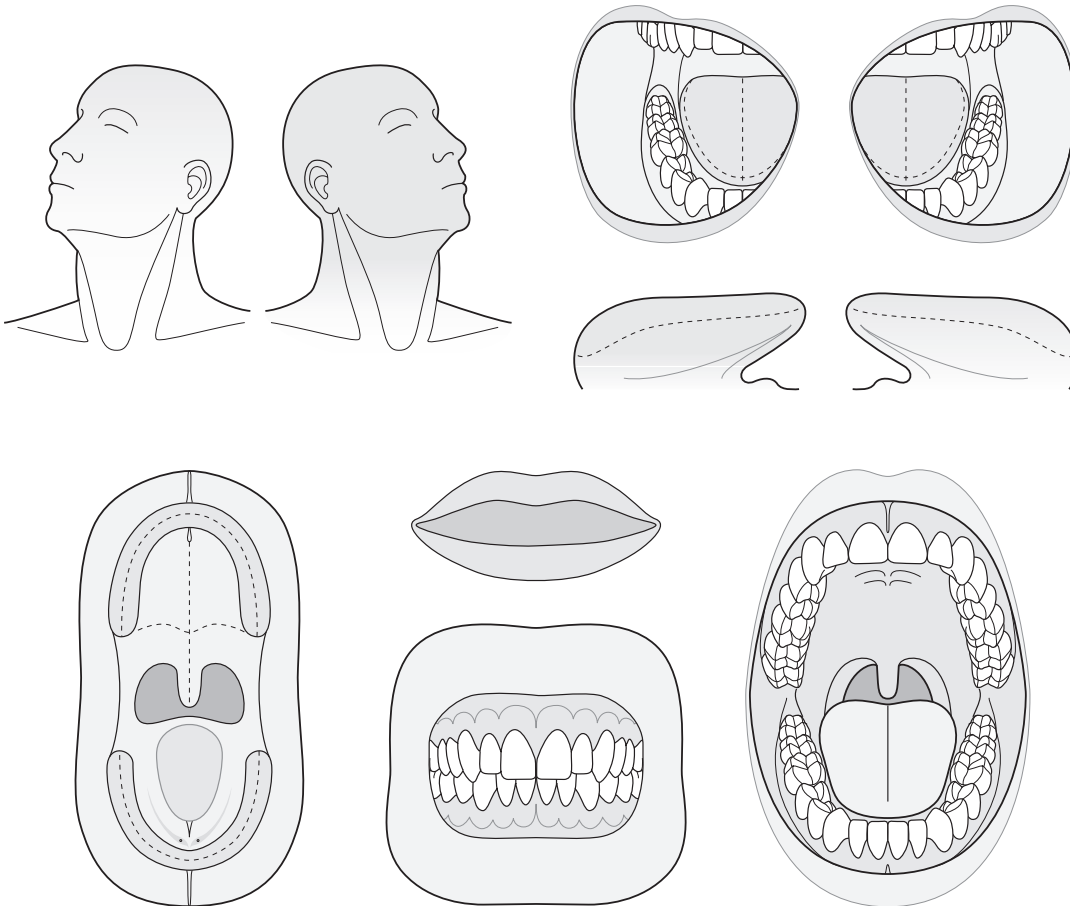
Directions: Highlight or circle the applicable descriptors

(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula								
(B) Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform								
(C) Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)								
(D) Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)								
(T) T y p e	<table border="0"> <tr> <td>Nonpalpable Flat Lesions</td><td> <i>Macule</i> - Flat discolored spot, less than 1 cm in size <i>Patch</i> - Flat discolored spot, larger than 1 cm in size </td></tr> <tr> <td>Palpable, Elevated, Solid Masses</td><td> <i>Papule</i> - Solid raised lesion, less than 1 cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1 cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1 cm in diameter <i>Wheal</i> - Localized area of skin edema </td></tr> <tr> <td>Fluid-Filled Lesions</td><td> <i>Vesicle</i> - Small blister filled with clear fluid, less than 1 cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1 cm in diameter <i>Pustule</i> - Small raised lesion filled with pus </td></tr> <tr> <td>Loss of Skin or Mucosal Surface</td><td> <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack </td></tr> </table>	Nonpalpable Flat Lesions	<i>Macule</i> - Flat discolored spot, less than 1 cm in size <i>Patch</i> - Flat discolored spot, larger than 1 cm in size	Palpable, Elevated, Solid Masses	<i>Papule</i> - Solid raised lesion, less than 1 cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1 cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1 cm in diameter <i>Wheal</i> - Localized area of skin edema	Fluid-Filled Lesions	<i>Vesicle</i> - Small blister filled with clear fluid, less than 1 cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1 cm in diameter <i>Pustule</i> - Small raised lesion filled with pus	Loss of Skin or Mucosal Surface	<i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack
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Figure 12-55A. Page I of Lesion Descriptor Worksheet for Miss Biddle.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 12-55B. Page 2 of Lesion Descriptor Worksheet for Miss Biddle.

FICTITIOUS PATIENT CASE C: Mr. Carlos Chavez

Figure 12-56. Finding on upper eyelid.

Lesion Descriptor Worksheet

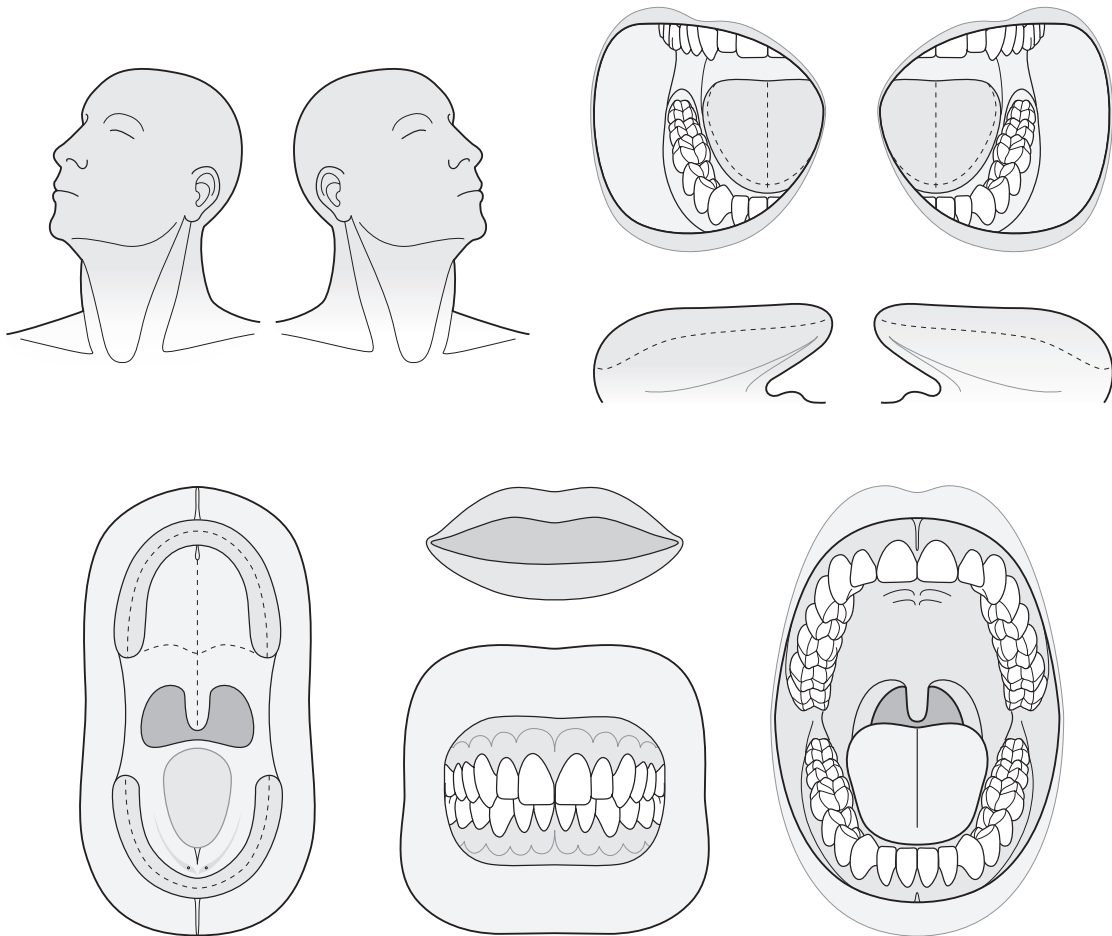
Directions: Highlight or circle the applicable descriptors

Ⓐ Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
Ⓑ Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
Ⓒ Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped confluent, linear)
Ⓓ Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
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Figure 12-57A. Page 1 of Lesion Descriptor Worksheet for Mr. Chavez.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 12-57B. Page 2 of Lesion Descriptor Worksheet for Mr. Chavez.

FICTITIOUS PATIENT CASE D: Mrs. Donna Doi



Figure 12-58. Finding near right ali nasi.

Lesion Descriptor Worksheet

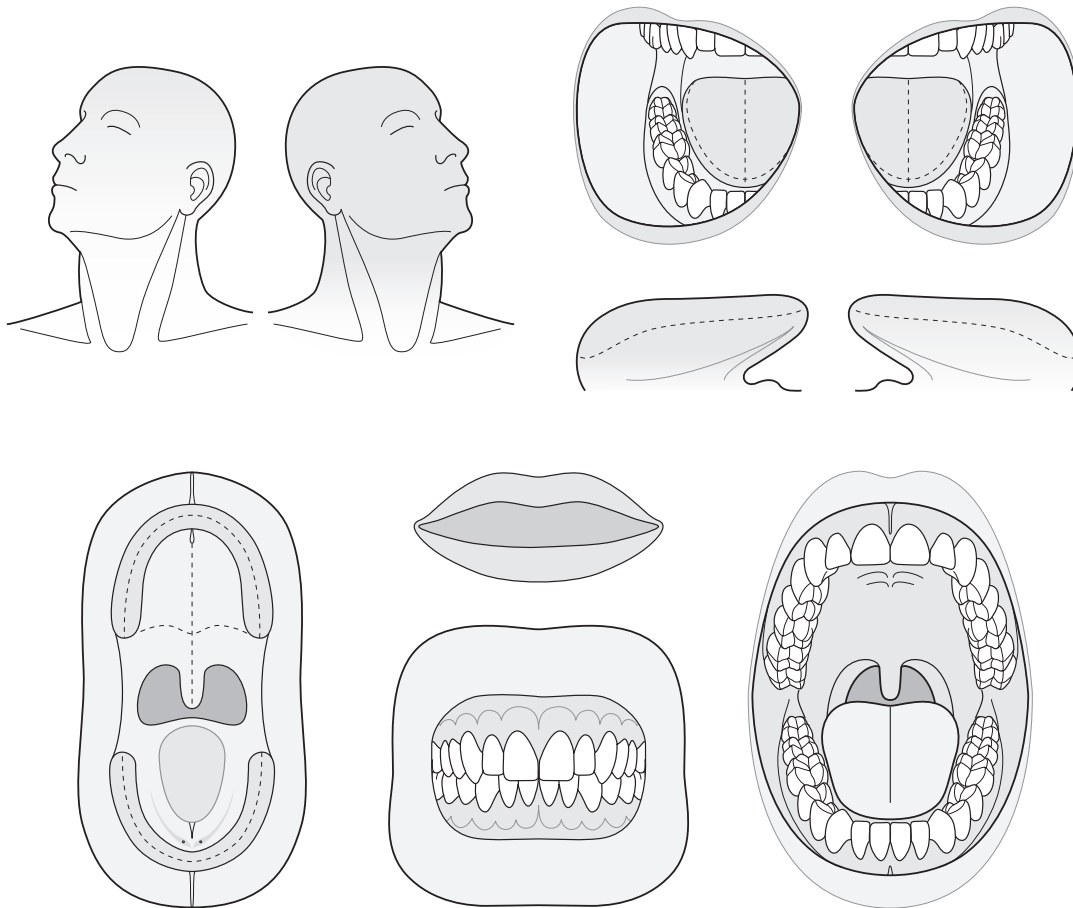
Directions: Highlight or circle the applicable descriptors

Ⓐ Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula								
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Figure 12-59A. Page 1 of Lesion Descriptor Worksheet for Mrs. Doi.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 12-59B. Page 2 of Lesion Descriptor Worksheet for Mrs. Doi.

FICTITIOUS PATIENT CASE E: Miss Esther Eads

Figure 12-60. Findings on upper eyelid.

Lesion Descriptor Worksheet

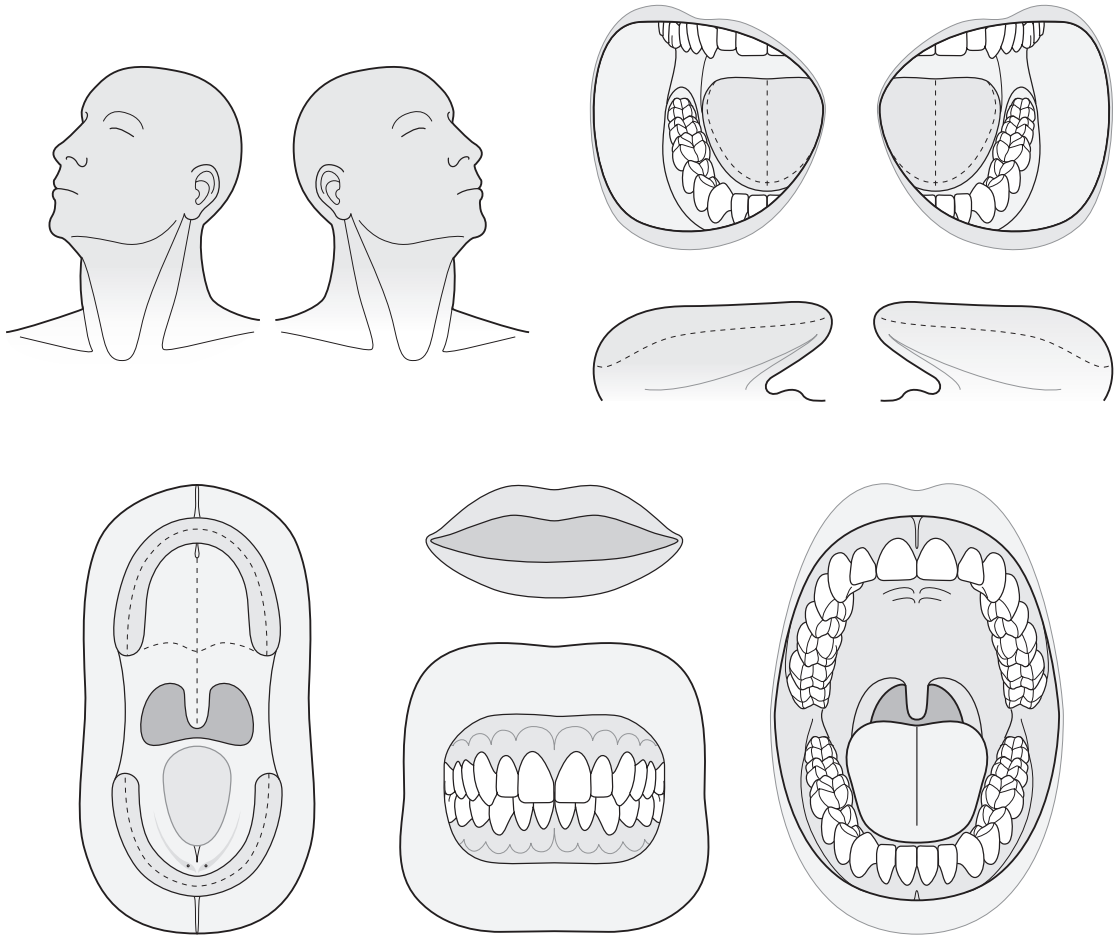
Directions: Highlight or circle the applicable descriptors

(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
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Figure 12-61A. Page 1 of Lesion Descriptor Worksheet for Miss Eads.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 12-61B. Page 2 of Lesion Descriptor Worksheet for Miss Eads.

SECTION 7 QUICK QUESTIONS

1. Of the following procedures, which one could save a patient's life?
 - A. Periodontal debridement (scaling and root planning)
 - B. Head and neck examination
 - C. Fluoride treatment
 - D. Bitewing radiographs
2. Which of the following structures usually is NOT assessed during the head and neck examination?
 - A. Skin of the face and neck
 - B. Temporomandibular joint (TMJ)
 - C. The ear drum
 - D. Lymph nodes of the head and neck
3. The cervical lymph nodes lie above, beneath, and posterior to the _____ muscle.
 - A. Sternomastoid
 - B. Masseter
 - C. Temporalis
 - D. Supraclavicular
4. Which of the following plays an important part in the body's defense against infection?
 - A. Thyroid gland
 - B. Parotid gland
 - C. Submandibular gland
 - D. Lymph nodes
5. How many lymph nodes are located in the neck?
 - A. 40 to 70
 - B. 170 to 200
 - C. 300 to 600
 - D. 400 to 700
6. The medical term for an enlarged lymph node is:
 - A. Lymphoma
 - B. Lymphectomy
 - C. Lymphadenopathy
 - D. Lymphoepithelioma

7. Which of the following is the largest salivary gland?
- A. Submandibular gland
 - B. Parathyroid gland
 - C. Submandibular gland
 - D. Parotid gland
8. The thyroid gland secretes hormones that:
- A. Are components of the body's defense system
 - B. Help the body to withstand stress
 - C. Control the body's metabolic rate
 - D. Buffer acids in the oral cavity

SECTION 8 SKILL CHECK

TECHNIQUE SKILL CHECKLIST

HEAD AND NECK EXAMINATION

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Subgroup 1: Overall Appraisal of the Head, Neck, Face, and Skin Unobtrusively inspects the skin and facial symmetry of the face and neck.		
Positions the patient in an upright-seated position. Asks patient to remove eyeglasses and loosen clothing that limits examination of the neck. Requests that the patient not lean the head against the headrest.		
Visually inspects the head, scalp, and ears.		
Washes and dries hands. Follows clinic protocol regarding gloves.		
Subgroup 2: Lymph Nodes of the Head and Neck Palpates the occipital nodes.		
Palpates the posterior auricular lymph nodes by applying circular compression with the fingertips.		
Palpates the preauricular lymph nodes by applying circular compression with the fingertips.		
Palpates the submental nodes using digital compression with the thumb and index finger.		
Palpates the submandibular nodes by rolling the tissue over the mandible.		
Palpates the cervical nodes medial to the muscle by grasping the muscle and rotating the fingertips back and forth over the muscle. Covers the entire length of the muscle from the ear to the clavicle.		
Palpates the cervical lymph nodes posterior to the muscle by applying gentle compression under the muscle against the underlying tissues along the entire length of the muscle.		
Palpates the supraclavicular lymph nodes using circular compression.		
Subgroup 3: Salivary and Thyroid Glands Palpates the parotid glands using circular compression.		
Locates submandibular glands by finding the antegonial notch. Asks the patient to press the tip of the tongue against the roof of the mouth while compressing the glands upward against the tensed muscles.		

(Note Skill Checklist continues on the next page)

TECHNIQUE SKILL CHECKLIST

HEAD AND NECK EXAMINATION (continued)

Criteria:	S	E
Locates the thyroid gland below the thyroid cartilage. Asks patient to swallow a sip of water, if necessary to facilitate locating the gland. Keeping the hand in a stationary position, palpates the gland as the patient swallows sips of water.		
Subgroup 4: Temporomandibular Joint Locates the joints near the tragus of each ear and palpates as the patient slowly opens and closes the mouth.		
Palpates the TMJ as the patient makes lateral exertions to the right and then, to the left.		
OPTIONAL: Assesses the range of motion by asking the patient to place the index, middle, and ring fingers between the incisal edges of the upper and lower incisors.		
Documents notable findings in the patient chart or computerized record.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible 18 (or 19 if optional step is included) equals the Percentage Grade _____		

COMMUNICATION SKILL CHECKLIST

HEAD AND NECK EXAMINATION

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of a fictitious patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

CRITERIA:	S	E
Explains what is to be done.		
Reports notable findings to the patient. As needed, makes referrals to a physician or dental specialist.		
Encourages patient questions before and during the head and neck examination.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level avoiding dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct medical and dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (6) equals the Percentage Grade _____		

NOTES

NOTES

MODULE 13

Oral Examination

MODULE OVERVIEW

This module describes the oral examination. The oral examination is a physical examination technique that consists of a systematic visual inspection and/or palpation of the structures of the oral cavity and oropharynx. This examination should be a routine part of each patient's dental visit.

This module describes the oral examination including:

- An anatomy review of oral structures
- Peak procedure for a systematic oral examination

Before beginning this module, you should have completed the chapter on oral examination in a dental theory textbook.

MODULE OUTLINE

SECTION 1 Examination Overview 454

About Oral Cancer
What Dental Health Care Providers Can Do
Incidence
Risk Factors, Signs, and Symptoms
Anatomy Review
Landmarks of the Lips
Salivary Glands
Ventral Surface of the Tongue and Anterior Floor
of the Mouth
Palate, Tonsils, and Oropharynx

SECTION 2 Peak Procedures 462

Procedure 13-1: Oral Examination
Subgroup 1: Inspection of Lips and Vermillion Border
Subgroup 2: Inspection of the Oral Cavity and the
Mucosal Surfaces
Subgroup 3: Underlying Structures of the Lips and Cheeks
Subgroup 4: Floor of the Mouth
Subgroup 5: Salivary Gland Function
Subgroup 6: The Tongue
Subgroup 7: Palate, Tonsils, and Oropharynx

SECTION 3 Ready References 479

Tools for Introducing the Oral Examination to Patients
Internet Resources for Information-Gathering
Internet Resources for Oral Cancer Education
Internet Resources for Oral Cancer Detection
Suggested Readings

SECTION 4	The Human Element	483
	Through the Eyes of a Student	
	English to Spanish Phrase List for Oral Examination	
SECTION 5	Practical Focus—Fictitious Patient Cases	485
SECTION 6	Quick Questions	501
SECTION 7	Skill Check	503
	Technique Skill Checklist: Oral Examination	
	Communication Skill Checklist: Oral Examination	

SKILL GOALS

- Recognize the normal anatomy of the oral cavity.
- Locate the following oral structures: parotid ducts, sublingual fold, sublingual caruncles, papillae, anterior and posterior pillars, and the tonsils.
- Recognize deviations from normal in the oral cavity.
- Position the patient correctly for the oral examination.
- Provide information to the patient about the oral examination and any notable findings.
- Demonstrate the oral examination using correct technique and a systematic sequence of examination.
- Document notable findings in the patient chart or computerized record.
- Recognize findings that have implications in planning dental treatment.
- Provide referral to a physician or dental specialist when findings indicate the need for further evaluation.
- Demonstrate knowledge of the soft tissue findings by applying concepts from this module to the fictitious patient cases A to E found in Section 5.

SECTION 1 EXAMINATION OVERVIEW

The **oral examination** is a physical examination technique consisting of a systematic inspection of the oral structures. Similar to the head and neck examination, this procedure takes only minutes. The oral examination allows the clinician to gather general information on the health of a patient, note early indications of some diseases, and detect abnormalities and potentially life-threatening malignancies at an early stage. Tissue changes in the mouth that signal the beginnings of cancer often can be seen and felt easily. With early detection and timely treatment, deaths from oral cancer could be dramatically reduced. When detected at the earliest stages, oral cancer has an 80% survival rate. At present, only one third of oral cancers are diagnosed in the early stage. For this reason, the American Dental Association (ADA) recommends that a thorough oral examination should be a routine part of each patient's dental visit.

ABOUT ORAL CANCER

What Dental Health Care Providers Can Do

1. **Complete a thorough examination.** An oral examination should be a routine part of each patient's dental visit. Dental health care providers should be particularly vigilant in checking those who use tobacco or alcohol.
2. **Ask about tobacco and alcohol use.** Take a history of each patient's tobacco and alcohol use.
3. **Inform.** Tell patients about the association between tobacco use, alcohol use, and oral cancer.
4. **Follow-up.** Contact the patient after a week to see that the patient has followed through on referrals to a physician or dental specialist for suspicious lesions, findings, or patient reported symptoms of oral cancer. Request a copy the definitive diagnosis by physician or specialist.

Incidence

Many individuals are surprised to learn that oral cancer is the sixth deadliest cancer in the United States. The Oral Cancer Foundation estimates that one person in the United States dies from oral cancer every hour of every day. Of the oral structures, the tongue is the site with the highest incidence rate (Fig. 13-1).

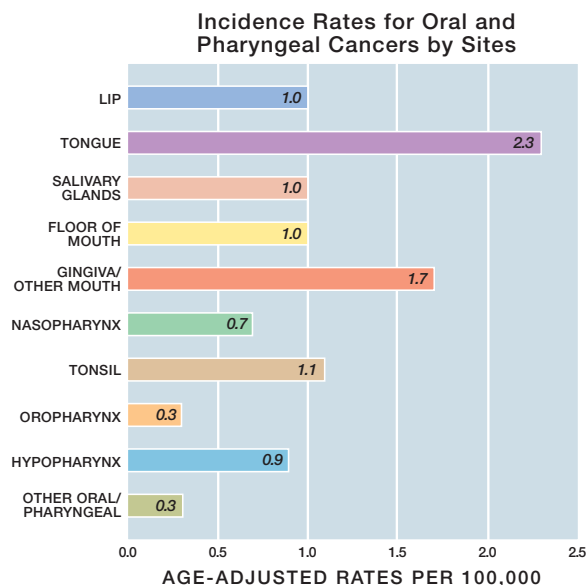


Figure 13-1. Incidence rates for oral and pharyngeal cancers by sites. The rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. (Source: National Institute of Dental and Craniofacial Research, National Institutes of Health and the Division of Oral Health, Centers for Disease Control and Prevention.)

RISK FACTORS, SIGNS, AND SYMPTOMS

The public domain publications of the U.S. Department of Health and Human Services, National Institutes of Health, and National Institutes of Dental and Craniofacial Research contain information about risk factors, prevention, signs, and symptoms of oral cancer. A summary of this information is given below.

Risk Factors for Oral Cancer

1. Age

- The incidence of oral cancer rises steadily with age, usually because older persons have had a longer exposure to risk factors, such as exposure to sunlight.
- Incidence peaks in persons ages 55 to 74.

2. Gender. Men are two times more likely to develop oral cancer than are women.

3. Sunlight. Exposure to sunlight is a risk factor for lip cancer.

4. Tobacco and alcohol use

- Tobacco and excessive alcohol use increases the risk of oral cancer.
- Using tobacco and alcohol in combination poses a much higher risk than using either substance alone.

Box 13-1. Signs and Symptoms of Oral Cancer

LESIONS THAT MIGHT SIGNAL ORAL CANCER

- Leukoplakia (white lesions): possible precursor to cancer
- Erythroplakia (red lesions): less common than leukoplakia, but with greater potential for becoming cancerous

SYMPTOMS THAT YOUR PATIENT MIGHT REPORT

- Soreness
- A lump or thickening
- Numbness in the tongue or other areas of the mouth
- Feeling that something is caught in the throat, hoarseness
- Difficulty chewing or swallowing
- Ear pain
- Difficulty moving the jaw or tongue
- Swelling of the jaw that causes dentures to fit poorly

MANAGEMENT OF SUSPICIOUS LESIONS

- White or red lesions should be reevaluated in 2 weeks.
- Any white or red lesion that does not resolve itself in 2 weeks should be biopsied to obtain a definitive diagnosis.
- Any symptom listed above that persists for more than 2 weeks indicates the need for referral to an appropriate specialist for definitive diagnosis.

ANATOMY REVIEW

Landmarks of the Lips

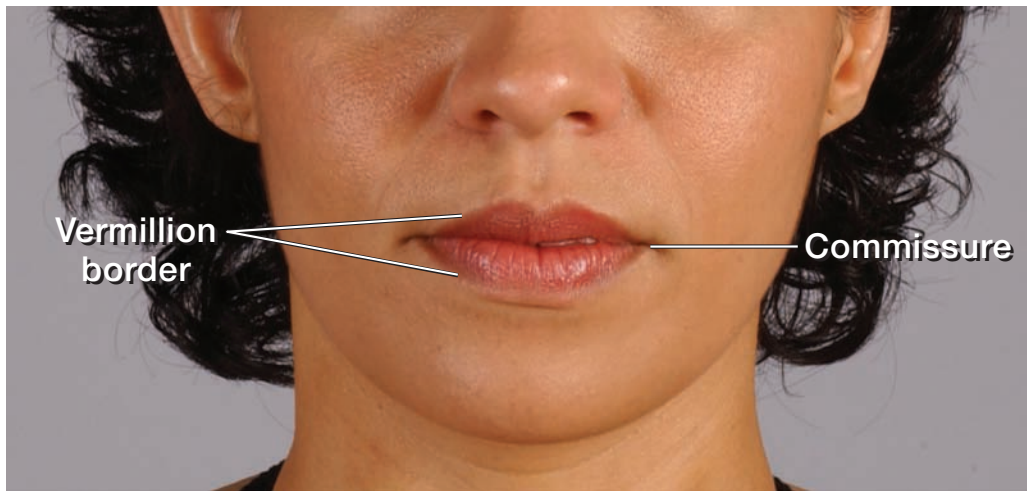


Figure 13-2. The lips. The **vermillion border** and **commissures** of the lips are useful landmarks when recording the location of a soft tissue lesion or other notable finding.

Figure 13-3. Angioedema of the lower lip.

This swollen lower lip was caused by an allergic reaction to the latex gloves. Questions that screen for a history and symptoms of latex sensitivity should be included on the health history form. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)



Figure 13-4. Recurrent herpes simplex.

These recurrent herpes labialis vesicles contain the herpes simplex virus (HSV). Contact with the fluid can result in the spread of this viral infection to other epidermal sites. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)



Salivary Glands

The major salivary glands are three pairs of glands that produce saliva.

1. The **parotid glands** are the largest of the salivary glands. Each gland is located on the surface of the masseter muscle between the ear and the jaw.
 - Each parotid gland has a duct that opens into the oral cavity opposite the maxillary first molar.
2. The **submandibular glands** sit below the jaw toward the back of the mouth.
 - Each submandibular gland has a duct that extends forward in the floor of the mouth to open into the **sublingual caruncles**.
 - Refer to Figure 13-7 for the anatomy of the anterior floor of the mouth.
3. The **sublingual glands** are located in the anterior floor of the mouth next to the mandibular canines.
 - It has one major duct that opens—along with the submandibular glands—into the sublingual caruncles.
 - In addition, the sublingual gland has several minor ducts, which open in a line along the fold of tissue beneath the tongue, known as the sublingual fold.

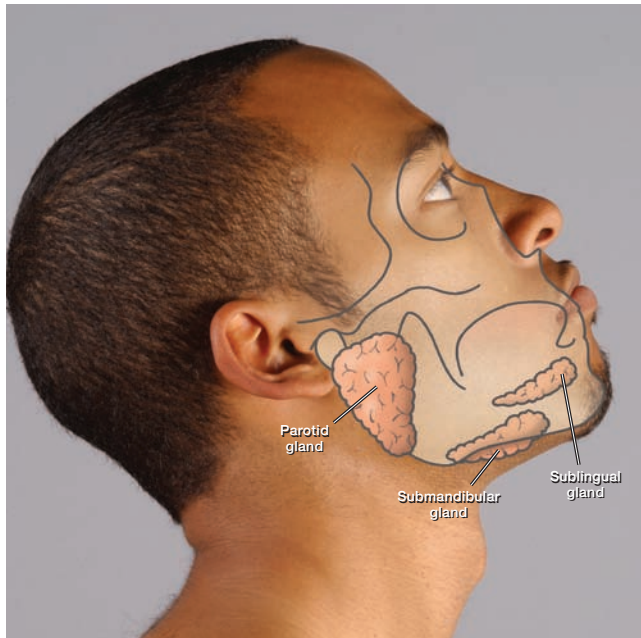
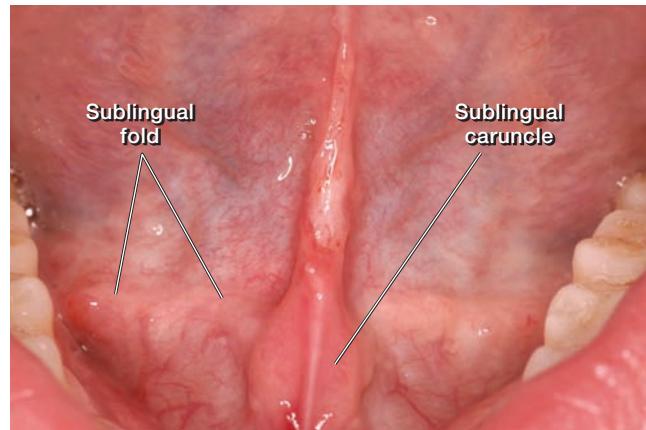


Figure 13-5. The major salivary glands.



Figure 13-6. Parotid duct. The parotid duct starts at the anterior part of the gland and opens on the inside of the cheek opposite the second molar. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)

Figure 13-7. Salivary Ducts. The submandibular and sublingual glands have ducts that open into the sublingual caruncles on the floor of the mouth. The sublingual gland also has several minor ducts that open along the sublingual fold. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)



Ventral Surface of the Tongue and Anterior Floor of the Mouth

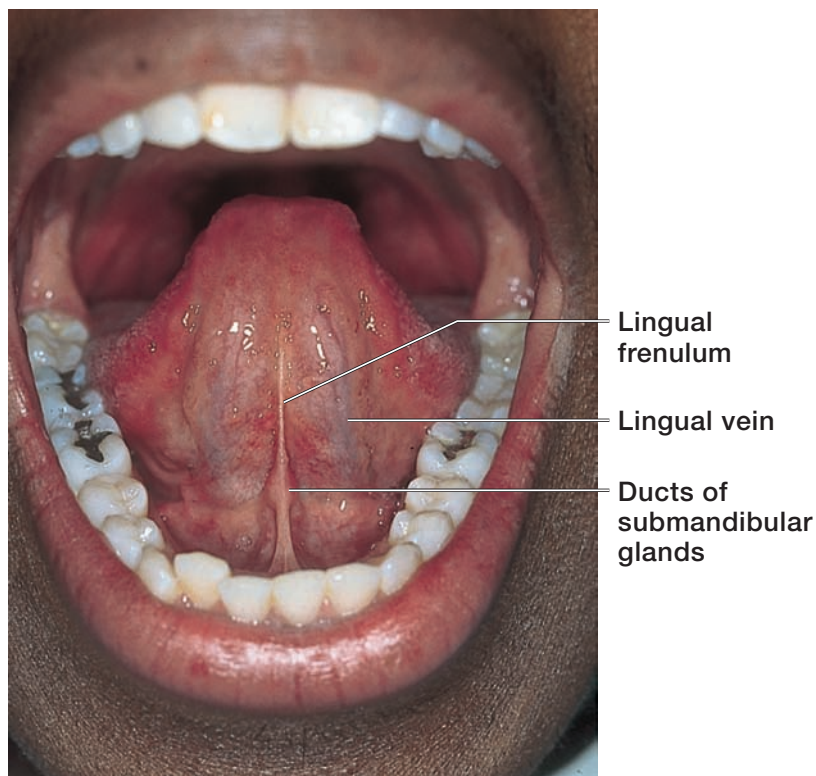
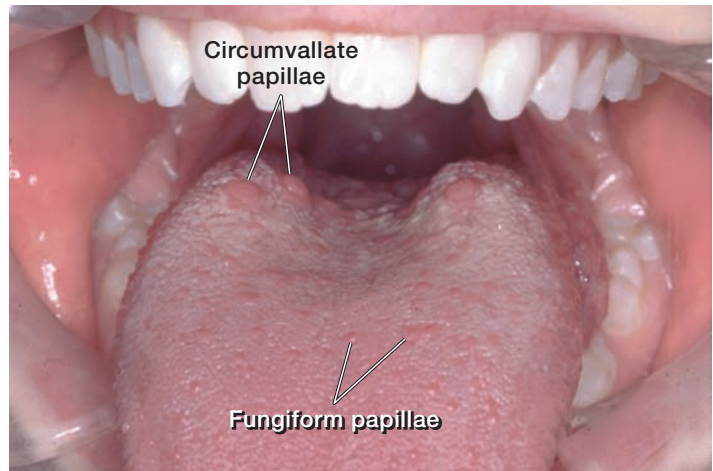
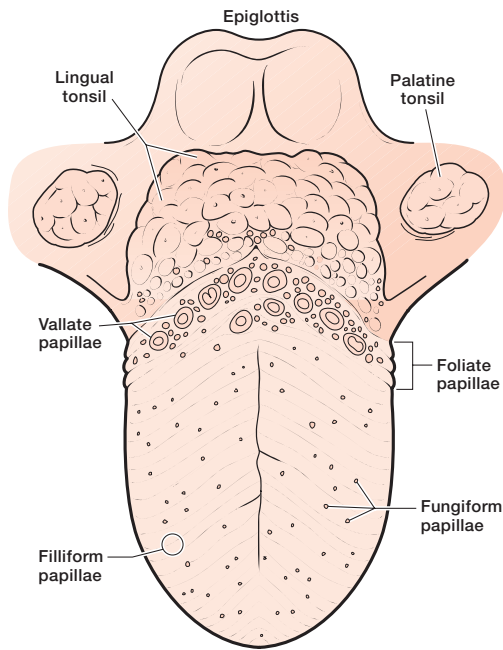


Figure 13-8. Landmarks of the ventral surface of the tongue and anterior floor of the mouth. The anterior view of the mouth and ventral surface of the tongue, showing the:

- **Sublingual caruncles**—located on either side of the **lingual frenulum** (the tissue that attaches the tongue to the floor of the mouth)
- Minor ducts of the submandibular gland that open in the fold of tissue beneath the tongue, known as the **sublingual fold**
- **Sublingual veins** of the tongue

(Adapted from Bickley LS, Szilagyi P. *Bates' Guide to Physical Examination and History Taking*, 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2003.)



(Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)

Figures 13-9 and 13-10. Dorsum of the tongue and its papillae. The papillae are the taste sensitive structures of the tongue.

- The largest and most posterior papillae are the **circumvallate papillae**.
- The long, thin, gray hair-like **filiform papillae** cover the anterior two thirds of the dorsal surface of the tongue.
- The **fungiform papillae** are broad, round, red mushroom-shaped papillae.
- The **foliate papillae** are 3 to 5 large, red, leaflike projections on the lateral border of the posterior third of the tongue.
- The **circumvallate papillae** are 8 to 12 large papillae that form a V-shaped row.

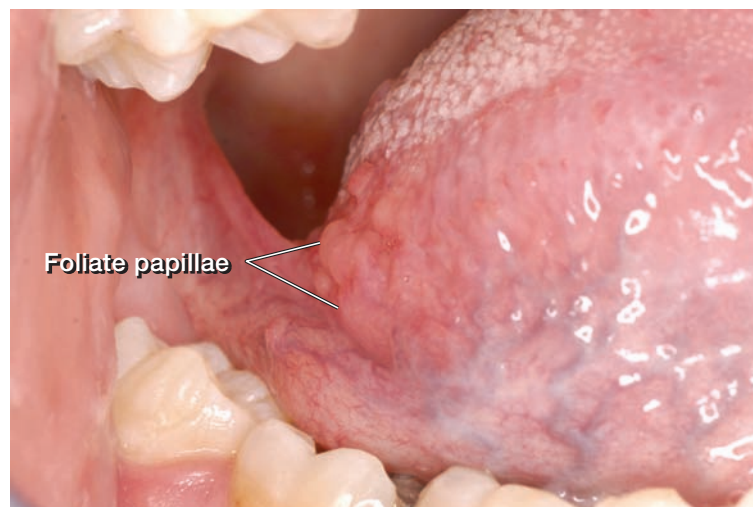


Figure 13-11. Folate papillae. The foliate papillae are large leaflike projections on the lateral border of the posterior third of the tongue. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)



Figure 13-12. Pigmented Tongue. Pigmentation of the tongue is a normal finding most commonly seen in dark skinned individuals. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)



Figure 13-13. Ankyloglossia. Ankyloglossia, a short lingual frenum, limits tongue movement. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)

Palate, Tonsils, And Oropharynx

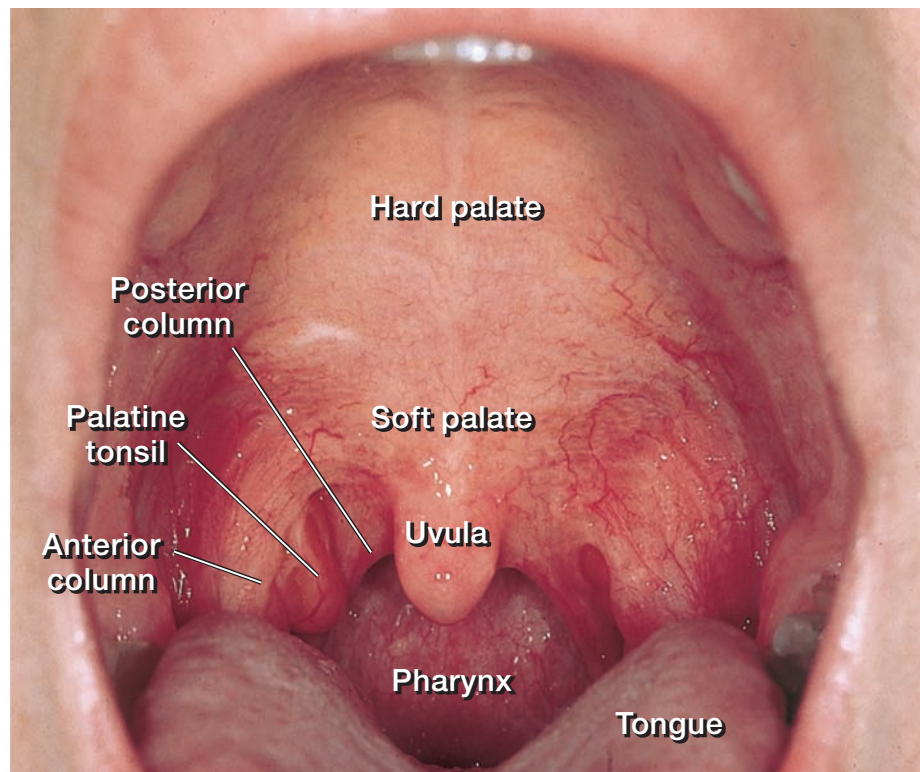


Figure 13-14. Landmarks of the hard and soft palate, tonsils, and oropharynx. (From Bickley LS, Szilagy P. Bates' *Guide to Physical Examination and History Taking*. 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2003.)



Figure 13-15. Bifid uvula. A bifid uvula is a minor cleft of the posterior soft palate. (Courtesy of Dr. Richard Foster, Guilford Technical Community College.)



Figure 13-16. Tonsillitis. Tonsillitis is an infection or inflammation of the tonsils characterized by severe sore throat, fever, headache, enlarged tender lymph nodes in the neck, and enlarged red tonsils. (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)

SECTION 2 PEAK PROCEDURE

The oral examination involves the inspection and/or palpation of the structures of the oral cavity and oropharynx. To assist the examiner, it is helpful to organize the structures to be examined into seven subgroups:

- Subgroup 1: Lips and Vermillion Border
- Subgroup 2: Oral Cavity and the Mucosal Surfaces
- Subgroup 3: Underlying Structures of the Lips and Cheeks
- Subgroup 4: Floor of the Mouth
- Subgroup 5: Salivary Gland Function
- Subgroup 6: The Tongue
- Subgroup 7: Palate, Tonsils, and Oropharynx

Subgroup 1: Inspection of Lips and Vermillion Border

TABLE 13-1. Lips and Vermillion Border: What Can I Expect?

Normal findings	• At rest, the lips normally touch • The surface of lips is smooth and intact with a normal color and texture • The vermillion border is even and not raised
Notable findings	• Changes in shape or texture (fissuring, desquamation, crusts) • Chapped or cracked lips • Pigment changes or variations in color • Lip pits • Irregular vermillion border • Lips that do not meet at rest • Cheilosis at the commissures • Herpetic lesions • Soft tissue lesions • Swelling of the lips, trauma, or lip biting • Asymmetrical mouth; may indicate a neurological condition, tumors, or infections

Procedure 13-1. Oral Examination**EQUIPMENT**

Gloves and protective gear for the clinician

Safety glasses for the patient

2" × 2 inch" gauze squares, cotton-tipped applicators, and a dental mirror

SUBGROUP 1: VISUAL INSPECTION OF THE LIPS AND VERMILLION BORDER**1. Preparation for the examination.**

Figure 13-17.

- After briefly explaining the procedure to the patient, ask him or her to remove partial or complete dentures, if applicable. Give female patients a tissue to remove lipstick.
- Provide the patient with safety glasses.
- Wash your hands and don gloves.
- Place the patient in a supine position
- Position yourself in a seated position.

2. Lips and vermilion border—visual inspection.

Figure 13-18.

- Visually inspect the lips and vermilion border.

(continued)

Subgroup 2: Inspection of the Oral Cavity and the Mucosal Surfaces

TABLE 13-2. Mucosal Surfaces: What Can I Expect?

Normal findings	• Smooth, intact, and coral pink to bluish brown in color • No lesions • Intact frenum on maxillary and mandibular arches • Normal variations: Fordyce’s granules (ectopic sebaceous glands)
Notable findings	• Changes in color or texture • Swelling • Trauma • Lesions • Pale or reddened mucosa; dry mucosa • Linea alba • Leukoplakia • Lichen planus • Halitosis

Procedure 13-1. Oral Examination (continued)

SUBGROUP 2: INSPECTION OF THE ORAL CAVITY AND MUCOSAL SURFACES

2. Oral cavity—preliminary visual inspection.



Figure 13-19.

- Visually inspect the entire oral cavity and oropharynx.
- Adjust the dental unit light so that the oral cavity is well illuminated.
- Use a dental mirror to look for any conditions that would cause the examination procedure to be modified or postponed. Examples include herpetic lesions or a red, inflamed throat.

(continued)

Procedure 13-1. Oral Examination (continued)**SUBGROUP 2: INSPECTION OF THE ORAL CAVITY AND MUCOSAL SURFACES****2. Labial mucosa of the lower lip—visual inspection.****Figure 13-20.**

- Visually inspect the labial mucosa of the lower lip. Place the **index fingers** of both hands on the inside with your **thumbs** on the outside of the lower lip.
- **Tip:** Keep your **index finger(s) inside the mouth** and the **thumb(s) outside the mouth** while completing all the steps for examining the mucosal surfaces. This technique keeps your wet fingers inside the mouth while your dry fingers come in contact with the patient's face. Your patient will appreciate this courtesy.
- Evert and retract the lip fully away from the teeth and alveolar ridge. Retract the lip completely so that you have a clear view of the entire labial mucosal surface and vestibule of the lower lip.

3. Labial mucosa of the upper lip—visual inspection.**Figure 13-21.**

- Inspect the labial mucosa of the upper lip in a similar manner. Slide both **index fingers** upward to position them between the maxillary arch and the labial mucosa of the upper lip.
- Use your **thumbs** to evert and retract the upper lip.
- Stretch the tissue away from the dental arches. Visually inspect the entire mucosal surface adjacent to the maxillary teeth.

(continued)

Procedure 13-1. Oral Examination (continued)

SUBGROUP 2: INSPECTION OF THE ORAL CAVITY AND MUCOSAL SURFACES

4. Buccal mucosa—visual inspection.



Figure 13-22.

- Begin with the buccal mucosa on the **right side of the mouth**, near the **maxillary** arch.
- Place the **index fingers** of both hands on the inside with the **thumbs** on the outside of the cheek. One hand and a mirror can also be used, taking care not to press the mirror rim against the soft tissue.
- Evert the cheek and stretch the tissue of the right cheek up and away from the maxillary teeth. Extend the tissue completely away from the teeth so that no folds remain to conceal a lesion or abnormality. Proceed to Step 5 to examine the buccal mucosa adjacent to the mandibular arch on the right side of the mouth.

5. Buccal mucosa—visual inspection.



Figure 13-23.

- Next, inspect the buccal mucosa on the **right side of the mouth**, near the **mandibular** arch.
- Stretch the cheek down and **away from the mandibular arch** on the right side of the mouth.
- Extend the tissue completely away from the teeth so that no folds remain to conceal a lesion or abnormality.
- Visually inspect the buccal mucosa. **Repeat this process to examine the buccal mucosa on the left side of the mouth.**

Subgroup 3: Underlying Structures of the Lips and Cheeks

TABLE 13-3. Lips and Cheeks: What Can I Expect?

Normal findings	• Firm tissue • Moist tissue • Intact tissue
Notable findings	• Swellings or nodules • Changes in texture • Tenderness upon palpation • Minor salivary glands in the lips feel like small beads when palpated

Procedure 13-1. Oral Examination (continued)

SUBGROUP 3: UNDERLYING STRUCTURES OF THE LIPS AND CHEEKS

I. Lower lip—palpate.



Figure 13-24.

- Palpate the lower lip by compressing the tissues between your index fingers and thumbs.

(continued)

Procedure 13-1. Oral Examination (continued)**SUBGROUP 3: UNDERLYING STRUCTURES OF THE LIPS AND CHEEKS****2. Right cheek—palpate.****Figure 13-25.**

- Reposition your **left hand** with **middle and ring fingers** extraorally on the right cheek. These fingers are not wet with saliva; your patient will appreciate this courtesy.
- Reposition the **index finger of your right hand** so that it is opposite the fingers of your left hand.
- Compress the tissues on the right cheek between your fingers.
- Palpate the entire length of the buccal mucosa.
- Continue with Step 2 to palpate the left buccal mucosa.

3. Upper lip—palpate.**Figure 13-26.**

- Compress the tissues of the upper lip between the index fingers and thumbs.
- Palpate from the right commissure of the mouth to the left.

Subgroup 4: Floor of the Mouth

TABLE 13-4. Floor of the Mouth: What Can I Expect?

Normal findings	• Sublingual frenulum • Sublingual caruncles on either side of frenulum
Notable findings	• Changes in color or texture • Lesions or other surface abnormalities • Swelling, especially a unilateral swelling • Mucocele or ranula (fluid-filled swelling caused by pooling of saliva within the tissues due to trauma to a salivary gland duct) • Swelling due to salivary calculi or stones within a salivary gland or duct that obscure the flow of saliva and cause floor of mouth swelling • Leukoplakia on floor of mouth • Soft tissues should be palpated for hard areas or discomfort

Procedure 13-1. Oral Examination (continued)

SUBGROUP 4: FLOOR OF THE MOUTH

I. Anterior region of the floor of the mouth—visual inspection.



Figure 13-27.

- Ask the patient to touch the tip of the tongue to the roof of the mouth.
- Inspect the floor of the mouth. The inspection will be easier if the patient is in a chin-down position.
- With the floor of the mouth well illuminated, visually inspect the anterior portion.
- A mouth mirror may be helpful in providing indirect illumination.

(continued)

Procedure 13-1. Oral Examination (continued)

SUBGROUP 4: FLOOR OF THE MOUTH

2. Posterior region of the floor of the mouth—visual inspection.



Figure 13-28.

- Instruct your patient to relax the tongue and protrude it slightly. Fold a damp gauze square in half and grasp the tip of the tongue between the sides of the gauze square.
- Use your **right hand** to pull the tongue gently to the left commissure of the lip.
- Using your **left hand** to apply gentle pressure upward against the submandibular gland will make it easier to see the right posterior region of the floor of the mouth.
- Visually inspect the floor of the mouth. Repeat this procedure on the left side of the mouth.

3. Floor of the mouth—palpation.



Figure 13-29.

- Place your **right index finger** on the floor of the mouth.
- Position the **middle and ring fingers of the left hand** under the patient's chin on the right side of the head. Ask the patient to relax the tongue and close the mouth slightly. This maneuver relaxes the muscles in the floor of the mouth.
- Gently move the tongue out of the way with your index finger and touch the floor of the mouth. Palpate the floor of the mouth by pressing upward with your extraoral fingers and downward with your index finger as if you are "trying to make your fingers meet."
- Palpate from the **right posterior region** forward to the **anterior region** and then back to the **left posterior region** of the floor of the mouth.

Subgroup 5: Salivary Gland Function

TABLE 13-5. Salivary Gland Function: What Can I Expect?

Normal findings	• Normal flow of saliva
Notable findings	• Xerostomia • Swellings in floor of mouth from blocked saliva glands or ducts or trauma

Procedure 13-1. Oral Examination (continued)

SUBGROUP 5: SALIVARY GLAND FUNCTION

I. Submandibular and sublingual ducts—examine.



Figure 13-30.

- Ask the patient to raise his/her tongue toward the roof of the mouth.
- Use a gauze square to gently dry the area around the sublingual caruncles and sublingual fold.
- Press down gently with a cotton-tipped applicator in the region of the caruncles. A drop or stream of saliva should be evident.

(continued)

Procedure 13-1. Oral Examination (continued)**SUBGROUP 5: SALIVARY GLAND FUNCTION****2. Parotid salivary ducts—examine.**

Figure 13-31.

- Ask your patient to open the mouth halfway so that the cheek is easy to retract.
- The purpose of this examination is to evaluate the functioning of the right parotid gland.
- Retract the right cheek and locate the parotid papilla on the buccal mucosa opposite to the maxillary right molars.
- Dry the papilla with a gauze square; it will be difficult to detect saliva flowing out of the papilla if the area is wet.
- Using the tip of a cotton-tipped applicator, press the area slightly above the parotid papilla. It may be helpful to roll the cotton-tipped applicator from an area slightly above the papilla down to the papilla while applying pressure. Repeat this rolling action several times, as necessary.
- If the duct is functioning properly, a drop of saliva will be expressed from the papilla.
- Evaluate the parotid gland on the left side using the same procedure.

Subgroup 6: The Tongue

TABLE 13-6. The Tongue: What Can I Expect?**Normal findings**

- Moist, pink, may have frecklelike pigmentation
- Papillae present
- Symmetrical appearance
- **Ventral surface:** Lingual veins are distinct, raised linear structures on ventral surface of the tongue; enlarged vessels relating to aging may result in lingual varicosities
- **Dorsal surface:** median groove, filiform, fungiform, circumvallate papillae; networks of grooves may be pronounced with advancing age.
- **Lateral surface:** foliate papillae; scalloped outline from being pressed into the embrasure spaces

Notable findings

- Ulceration
- Lesions or swellings
- Nodules detectable upon palpation
- Variation in size, color, or texture
- Accumulated food debris may produce inflammation or malodor
- Asymmetrical shape
- Dry mouth
- Papillae absent
- Fissured or pebbly dorsal surface
- Geographic tongue
- Macroglossia
- Ankyloglossia
- Black hairy tongue with use of some antibiotics

Procedure 13-1. Oral Examination (continued)**SUBGROUP 6: THE TONGUE****1. Ventral surface of the tongue—visual inspection.****Figure 13-32.**

- Ask the patient to open wide and touch the tip of the tongue to the roof of the mouth.
- Closely inspect the ventral surface of the tongue.
- Keep in mind that the tongue is a frequent site of oral cancer.

2. Dorsal surface of the tongue—visual inspection.**Figure 13-33.**

- Ask the patient to relax the tongue and protrude it slightly from the mouth.
- Grasp the tongue with a damp gauze square. **Technique tip:** dry gauze may stick to the tongue.
- Gently pull the tongue forward being careful not to injure the lingual frenum on the incisal edges of the mandibular anterior teeth.
- Visually inspect the dorsal surface of the tongue. Use a mouth mirror if it is helpful.
- Keep in mind that the tongue is a frequent site of oral cancer.

(continued)

Procedure 13-1. Oral Examination (continued)**SUBGROUP 6: THE TONGUE****3. Lateral borders of the tongue—visual inspection.****Figure 13-34.**

- Gently pull the tongue to the left commissure and evert it slightly to obtain a clear view of the lateral surface and foliate papillae.
- Visually inspect the lateral surface of the tongue.
- Use a mirror to view the posterior portion of the lateral surface.
- Repeat this procedure to inspect the left border of the tongue.

4. Tongue—palpation.**Figure 13-35.**

- Palpate the body of the tongue between your index finger and thumb.
- Be alert for swellings or nodules.

Subgroup 7: Palate, Tonsils, and Oropharynx

TABLE 13-7. Palate, Tonsils, and Oropharynx: What Can I Expect?

Normal findings	• Hard palate: mucosa is firmly attached to the bone; pale pink in color with a bluish hue to brown; palatine raphae and rugae; firm when palpated; common variation is palatine torus • Soft palate: spongy in texture, firm but flexible; symmetrical elevation • Tonsils: large in childhood, small or absent in adults • Uvula: at midline
Notable findings	Palate: • Swelling • Lesions • Tumors • Cleft palate • Changes in color (red, white, gray) • Changes in texture are common in smokers, such as cobblestone appearance • Snuff dipper's or tobacco chewer's patch • Petechiae (discrete red spots on palate due to trauma) • Ulcerations • Trauma • Paralysis will cause the soft palate to sag on the affected side of the face and the uvula to pull to the unaffected side Tonsils: • Inflamed tonsils • Enlarged tonsils • Areas of exudates (pus) evident Oropharynx: • Markedly reddened and inflamed • Sore throat • Discomfort when swallowing or eating Uvula • Deviates from midline

Procedure 13-1. Oral Examination (continued)**SUBGROUP 7: PALATE, TONSILS, AND OROPHARYNX****1. Palate—preliminary visual inspection.**

Figure 13-36.

- Visually inspect the hard and soft palate, uvula, oropharynx and tonsils.

2. Hard and soft palate—palpate.

Figure 13-37.

- Use intermittent pressure with your index finger to palpate the hard and soft palate.
- **Technique tip:** Avoid sliding your finger across the palate, as this technique may cause the patient to gag. Instead, lift your index finger away from the palate to reposition it. This technique facilitates palpation.

(continued)

Procedure 13-1. Oral Examination (continued)

SUBGROUP 7: PALATE, TONSILS, AND OROPHARYNX

3. Tonsils and oropharynx—visual inspection.



Figure 13-38.

- You will need a mirror to move the tongue out of your line of vision.
- Position the mouth mirror with the reflecting surface down.
- Ask the patient to say “ah” as you depress the back of the tongue downward and forward. Moderate forward and downward pressure is needed to keep the tongue out of your line of vision.
- Visually inspect the tonsils and oropharynx.

4. Document.

- Document all notable findings from the oral examination in the patient chart or computerized record.

SECTION 3 READY REFERENCES

TOOLS FOR INTRODUCING THE ORAL EXAMINATION TO PATIENTS

THE ORAL CANCER FOUNDATION'S DIALOGUE BUTTONS



An excellent way to make patients aware that an oral examination screening is available is to wear one of the oral examination dialogue buttons from The Oral Cancer Foundation. Seeing the “We look for it” button worn by a dental health care provider, patients inevitably ask, “What do you look for?” This provides an excellent opening to respond to patient questions with a statement such as, “We look for oral cancer; 30,000 new patients will be diagnosed with this deadly disease this year. While you are here today, we can give you a thorough screening for oral cancer.” The “Dental exams saves lives” button usually creates a question in the patient’s mind as few people associate dental examinations with life-threatening events.

These buttons are available on the Oral Cancer Foundation website at <http://www.oralcancerfoudation.org>.

Ready Reference 13-1. Internet Resources for Information-Gathering

<http://www.nidcr.nih.gov/HealthInformation/OralHealthInformationIndex/OralCancer/default.htm>

National Institute of Dental and Craniofacial Research (NIDCR) website resources:

- **Oral Cancer** (printer-friendly PDF version)
- **The Oral Cancer Exam** (printer-friendly PDF version) A step-by-step guide for patients on what to expect during an oral cancer examination.
- **Detecting Oral Cancer: A Guide for Health Care Professionals** (also printer-friendly PDF version) A step-by-step guide for health professionals that provides instruction on examining the mouth for signs of oral cancer.
- **What You Need to Know about Oral Cancer** This brochure discusses possible causes, symptoms, diagnosis, and treatment of oral cancer. It also has information about rehabilitation and sources of support to help patients cope with oral cancer.
- **Combating Oral Cancer: The Dentist's Role in Preventing, Detecting a Deadly Disease** A special issue of the *Journal of the American Dental Association* coedited by an NIDCR researcher. Includes articles on the oral cancer examination, occurrence, management, and prevention.

<http://www.nidcr.nih.gov/Research/Extramural/DentalOralCranioRC.htm>

The NIDCR, in conjunction with the Division of Oral Health of the Centers for Disease Control and Prevention (CDC), has established a Dental, Oral, and Craniofacial Data Resource Center (DRC). This center is designed to facilitate use of available large-scale databases on oral health and related topics. The center makes relevant data in many areas available to a wide range of users and thus serves as a research resource.

<http://www.nlm.nih.gov/medlineplus/oralcancer.html>

The National Library of Medicine's compilation of links to government, professional, and non-profit/voluntary organizations with information on oral cancer.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5021a1.htm>

Promoting Oral Health: Interventions for Preventing Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries. This November 2001 report from the Task Force on Community Preventive Services presents the results of systematic reviews of the evidence of effectiveness of selected population-based interventions and presents recommendations for future interventions and intervention research.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5021a1.htm>

NIDCR links to resources about smokeless, chewing, and spit tobacco and the relationship to oral cancer.

<http://www.nohic.nidcr.nih.gov> or (301) 402-7364

U.S. Department of Health and Human Services provides free copies of the poster "Detecting Oral Cancer: A Guide for Health Care Professionals."

Ready Reference 13-2. Internet Resources for Oral Cancer Education

http://www.oralcancerfoundation.org/products/dentist_products.htm

The website of the **Oral Cancer Foundation** has resources to help dental health care providers make patients aware that oral cancer screenings are available in the dental setting. They suggest that dental clinicians wear a simple button as a way to begin dialogue with patients about the oral cancer screening examination in the dental office.

<http://www.spoync.org/>

The **Support for People with Oral and Head and Neck Cancer (SPOHNC)** website. SPOHNC, is a patient-directed, self-help organization dedicated to meeting the needs of oral and head and neck cancer patients. SPOHNC, founded in 1991 by an oral cancer survivor, addresses the broad emotional, physical, and humanistic needs of this population. This website includes many resources, including:

- **Eat Well—Stay Nourished:** A recipe and resource guide is a special cookbook that addresses the unique needs of oral and head and neck cancer patients.
- **“We Have Walked in Your Shoes”:** This new resource “packet” contains three sections of helpful information compiled by oral and head and neck cancer patients, survivors, and dental professionals. This valuable resource is presented in both English and Spanish and is a free download.
- **Oral Cancer and Head and Neck Awareness Bracelets:** SPOHNC offers an official oral and head and neck cancer awareness bracelet.

Ready Reference 13-3. Internet Resources for Oral Cancer Detection

<http://www.oralcdx.com>

The website of **OralCDx**. This website has information on the use of a biopsy brush for early cancer detection.

<http://www.vizilite.com>

The website of **VixiLite**. This website has information about the use of a special light and oral solution for the identification of suspicious oral lesions.

SUGGESTED READINGS

- Langlais RP, Miller CS. *Color atlas of common oral diseases*. Philadelphia: Lippincott Williams & Wilkins; 2008.
- Muzyka BC. Assessing salivary gland hypofunction—part one. *Pract Proced Aesthet Dent* 2001;13:688.
- Muzyka BC. Assessing salivary gland hypofunction—part two. *Pract Proced Aesthet Dent* 2002;14:262.

SECTION 4 THE HUMAN ELEMENT

Box 13-2. Through the Eyes of a Student

I so clearly remember the very first time that I did an intraoral examination. It was on my very first patient. Seeing my first patient was a day that I had dreamed about, but now that it was here I was very nervous. The first part of the appointment went well, but then it was here—the time to do the oral examination. There seemed to be so much to check and I was worried that I would forget to check an area. Fortunately, my patient must have realized how nervous I was because she said, “Take your time, I am retired. I am in no hurry.”

I started the examination and heard my instructor’s voice in my mind saying that the key to any procedure is to work through it one step at a time. I concentrated on going step-by-step and before I knew it I had completed the examination. I remember my relief when I finished the examination. Suddenly it was over—the procedure that I had worried about all last night—and I felt like yelling, “I did it!” To this day, I don’t think that I ever do an oral exam without remembering the first time I did this examination.

Joanne, R.D.H
Graduate, University of North Carolina at Chapel Hill

TABLE 13-8. English to Spanish Phrase List for Oral Examination

I am going to examine the soft tissues of your mouth.	Voy a examinar el tejido suave de su boca.
Please remove your partials or dentures.	Por favor saque las dentaduras.
I am going to recline the dental chair.	Voy a reclinar la silla dental.
Please wear these safety glasses.	Por favor pongase estos espejuelos de seguridad.
Just relax. This examination is not painful and takes only a few minutes.	No tenga miedo. La examinación no duele, y solamente toma unos minutos.
At any time during the examination, please tell me if any area is tender.	Ha cualquier tiempo durante la examinación, por favor dígame si tiene algún área que es sensible.
First, I will examine your lips and cheeks.	Primero voy a examinar los labios y mejillas.
Please open wide.	Por favor abra su boca ancho.
Please close slightly.	Por favor cierre un poco.
Please tilt your head forward (back).	Por favor incline su cabeza hacia adelante. Por favor incline su cabeza para atrás.
Please tilt your chin down.	Por favor incline la barbilla hacia abajo.
Please turn your head to the right (left).	Por favor vuelta su cabeza para la derecha. Por favor vuelta su cabeza para la izquierda.
Please tilt your head to the right (left).	Por favor incline su cabeza para la derecha. Por favor incline su cabeza para la izquierda.
Please look straight ahead.	Por favor mire hacia el frente.
I am checking the floor of your mouth.	Estoy examinando el suelo de su boca.
I am checking your saliva ducts.	Estoy examinando la glándula de saliva.
Next, I will check your tongue.	Ahora voy a examinar su lengua.
Please press your tongue against the roof of your mouth.	Por favor aprete su lengua contra el techo de la boca.
Please stick out your tongue.	Por favor protrude la lengua.
I am checking the roof of your mouth and throat.	Estoy examinando el techo de la boca y la garganta.
Everything looks (feels) fine.	Todo luce (se siente) bien.
I am concerned about this area and would like to have it examined by a specialist.	Estoy preocupado sobre esta zona, y quiero que sea examinada por un médico/especialista.
Here are the names of several specialists in our area.	Aquí tiene nombres de varios médicos/especialistas en esta área.
I can set up an appointment with the specialist of your choice.	Yo le puedo hacer una cita con el especialista de su preferencia.
I will write a note to the specialist explaining my concerns.	Le voy a escribir una nota al especialista para explicarle la preocupación.
I am going to get my clinic instructor.	Voy a buscar a mi instructor.

SECTION 5 PRACTICAL FOCUS—FICTITIOUS PATIENT CASES

DIRECTIONS:

- The photographs in this section show the findings from the oral examination of fictitious patients A–E. Refer to previous modules to refresh your memory regarding each patient's health history and vital signs, as there may be a connection between the patient's systemic health status or habits and the findings from the head and neck examination.
- If appropriate, use the **Lesion Descriptor Worksheet** to develop descriptions for the findings in this section.
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.
- Note: The clinical photographs in a fictitious patient case are for illustrative purposes but are not necessarily from the same individual. The fictitious patient cases are designed to enhance the learning experiences associated with each case.

SOURCES OF CLINICAL PHOTOGRAPHS

The author gratefully acknowledges the sources of the following clinical photographs in the Practical Focus Section of this module.

- Figure 13-40. Dr. Richard Foster, Guilford Technical Community College.
- Figure 13-42. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, Washington.
- Figure 13-44. Dr. Richard Foster, Guilford Technical Community College.
- Figure 13-45. Dr. Michael A. Huber, University of Texas Health Science Center at San Antonio, San Antonio, Texas.
- Figure 13-47. From Goodheart HP. *Goodheart's photoguide of common skin disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 13-49. CDC Public Health Image Library (PHIL).
- Figure 13-50. Dr. John S. Dozier, Tallahassee, Florida.

FICTITIOUS PATIENT CASE A: Mr. Alan Ascari



Figure 13-40. Finding on the left buccal mucosa.

Lesion Descriptor Worksheet

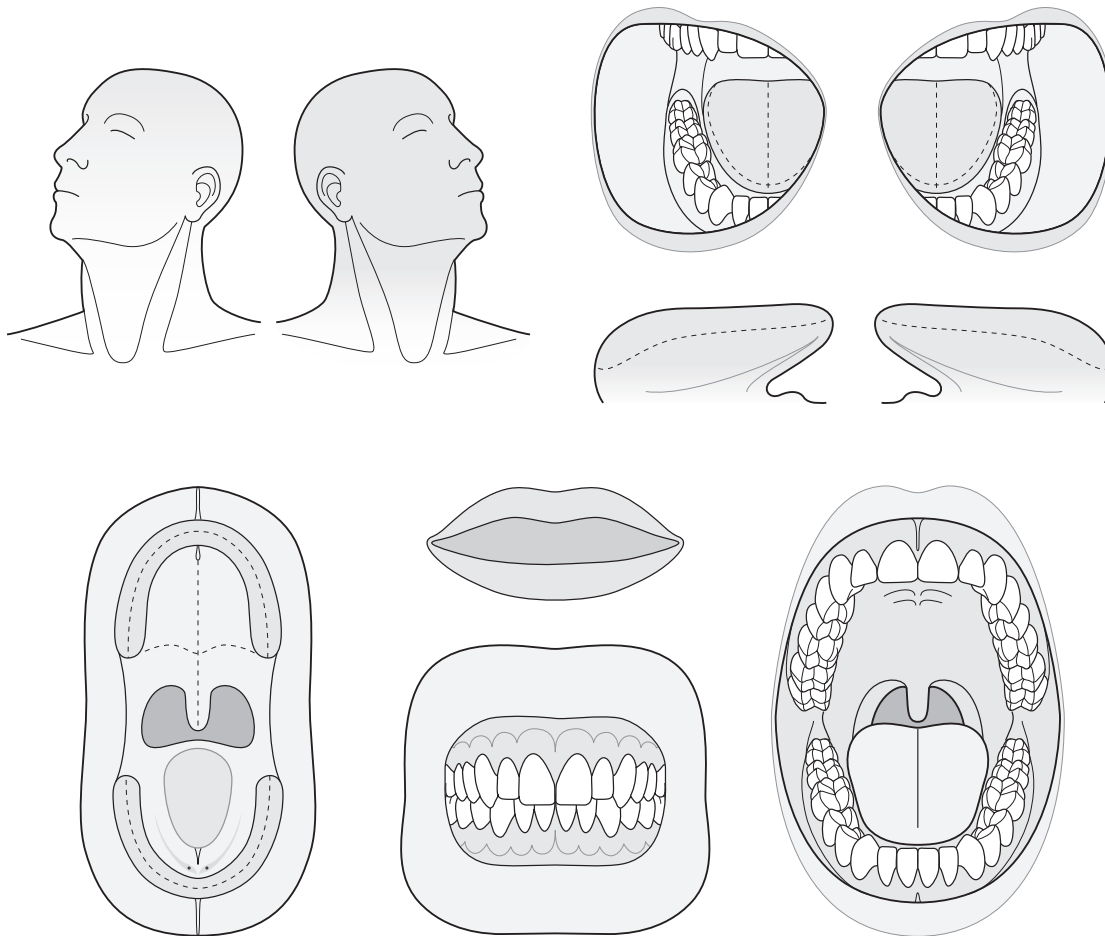
Directions: Highlight or circle the applicable descriptors

(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
(B) Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
(C) Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
(D) Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
(T) Type	Nonpalpable Flat Lesions <i>Macule</i> - Flat discolored spot, less than 1cm in size <i>Patch</i> - Flat discolored spot, larger than 1cm in size Palpable, Elevated, Solid Masses <i>Papule</i> - Solid raised lesion, less than 1cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1cm in diameter <i>Wheal</i> - Localized area of skin edema Fluid-Filled Lesions <i>Vesicle</i> - Small blister filled with clear fluid, less than 1cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1cm in diameter <i>Pustule</i> - Small raised lesion filled with pus Loss of Skin or Mucosal Surface <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 13-41A. Page 1 of Lesion Descriptor Sheet for Mr. Ascari.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 13-41B. Page 2 of Lesion Descriptor Sheet for Mr. Ascari.

FICTITIOUS PATIENT CASE B: Bethany Biddle

Figure 13-42. Findings for the tonsils.

Lesion Descriptor Worksheet

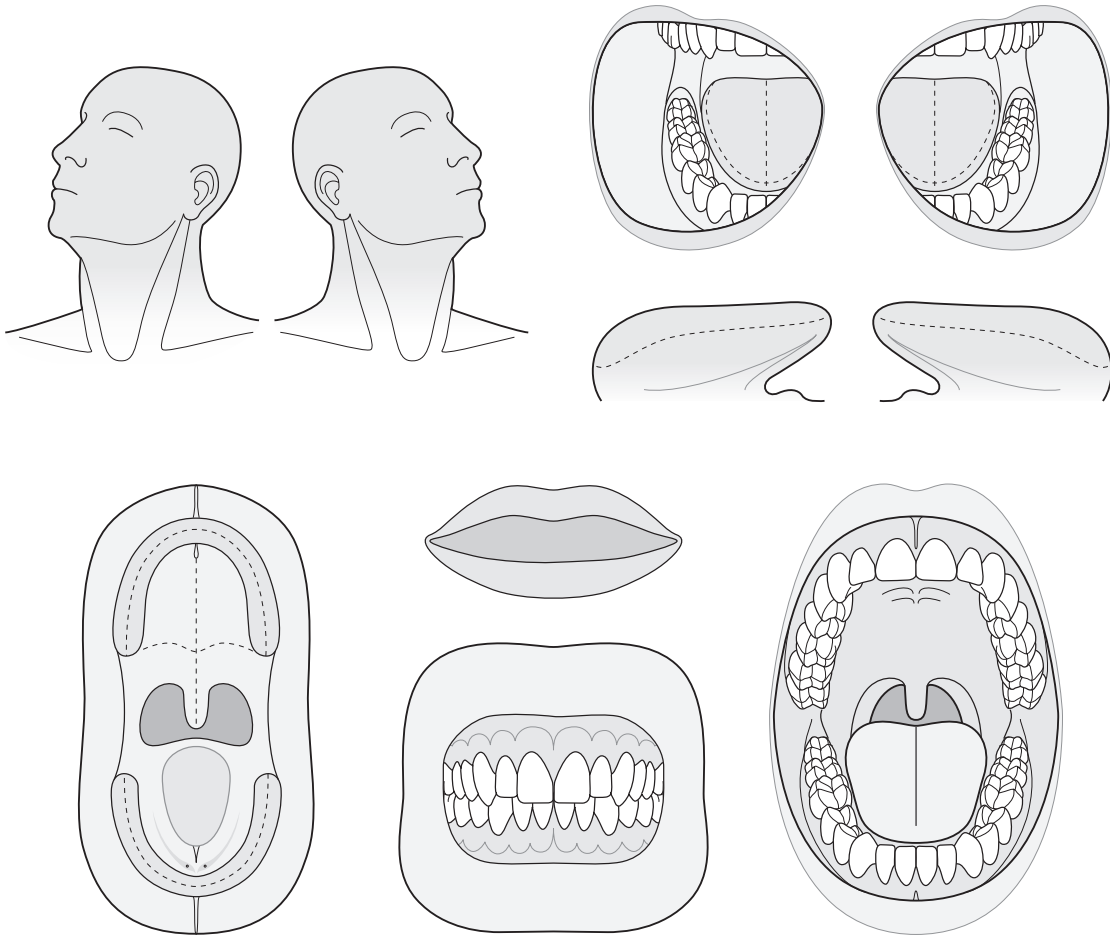
Directions: Highlight or circle the applicable descriptors

(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermilion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
(B) Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
(C) Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
(D) Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)
(T) T y p e	Nonpalpable Flat Lesions <i>Macule</i> - Flat discolored spot, less than 1cm in size <i>Patch</i> - Flat discolored spot, larger than 1cm in size Palpable, Elevated, Solid Masses <i>Papule</i> - Solid raised lesion, less than 1cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1cm in diameter <i>Wheal</i> - Localized area of skin edema Fluid-Filled Lesions <i>Vesicle</i> - Small blister filled with clear fluid, less than 1cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1cm in diameter <i>Pustule</i> - Small raised lesion filled with pus Loss of Skin or Mucosal Surface <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 13-43A. Page I of Lesion Descriptor Worksheet for Miss Biddle.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 13-43B. Page 2 of Lesion Descriptor Worksheet for Miss Biddle.

FICTITIOUS PATIENT CASE C: Mr. Carlos Chavez



Figure 13-44. Finding near right commissure of the lower lip.



Figure 13-45. Finding on dorsal surface of the tongue.

Lesion Descriptor Worksheet

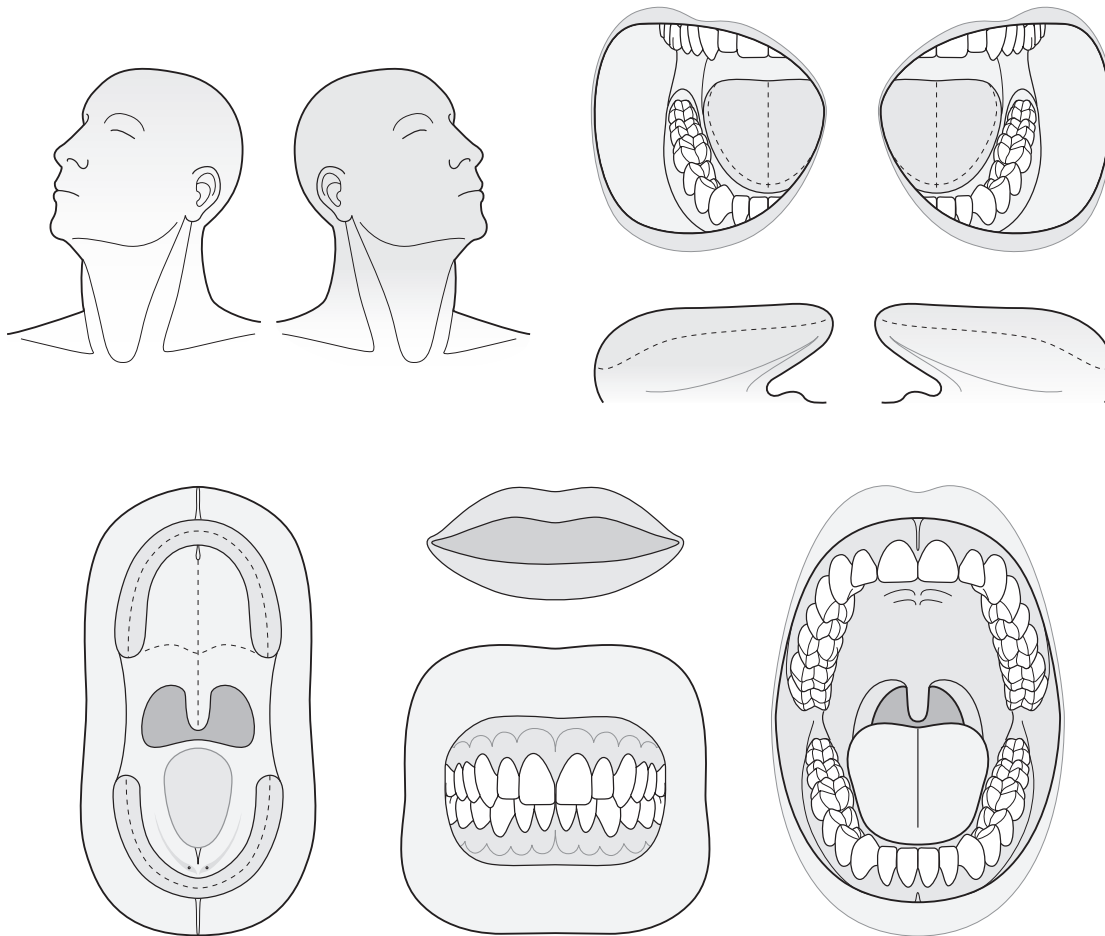
Directions: Highlight or circle the applicable descriptors

Ⓐ Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula								
Ⓑ Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform								
Ⓒ Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)								
Ⓓ Diameter/ Dimension	<i>If oblong or irregular in shape:</i> Length and width <i>If circular or round in shape:</i> Diameter (measurement of a line running from one side of a circle through the center to the other side)								
Ⓙ Type	<table border="0"> <tr> <td style="vertical-align: top; padding-right: 10px;">Nonpalpable Flat Lesions</td> <td> <i>Macule</i> - Flat discolored spot, less than 1cm in size <i>Patch</i> - Flat discolored spot, larger than 1cm in size </td> </tr> <tr> <td style="vertical-align: top; padding-right: 10px;">Palpable, Elevated, Solid Masses</td> <td> <i>Papule</i> - Solid raised lesion, less than 1cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1cm in diameter <i>Wheal</i> - Localized area of skin edema </td> </tr> <tr> <td style="vertical-align: top; padding-right: 10px;">Fluid-Filled Lesions</td> <td> <i>Vesicle</i> - Small blister filled with clear fluid, less than 1cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1cm in diameter <i>Pustule</i> - Small raised lesion filled with pus </td> </tr> <tr> <td style="vertical-align: top; padding-right: 10px;">Loss of Skin or Mucosal Surface</td> <td> <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack </td> </tr> </table>	Nonpalpable Flat Lesions	<i>Macule</i> - Flat discolored spot, less than 1cm in size <i>Patch</i> - Flat discolored spot, larger than 1cm in size	Palpable, Elevated, Solid Masses	<i>Papule</i> - Solid raised lesion, less than 1cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1cm in diameter <i>Wheal</i> - Localized area of skin edema	Fluid-Filled Lesions	<i>Vesicle</i> - Small blister filled with clear fluid, less than 1cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1cm in diameter <i>Pustule</i> - Small raised lesion filled with pus	Loss of Skin or Mucosal Surface	<i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack
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Figure 13-46A. Page 1 of Lesion Descriptor Worksheet for Mr. Chavez.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 13-46B. Page 2 of Lesion Descriptor Worksheet for Mr. Chavez.

FICTITIOUS PATIENT CASE D: Mrs. Donna Doi

Figure 13-47. Finding on lower lip.

Lesion Descriptor Worksheet

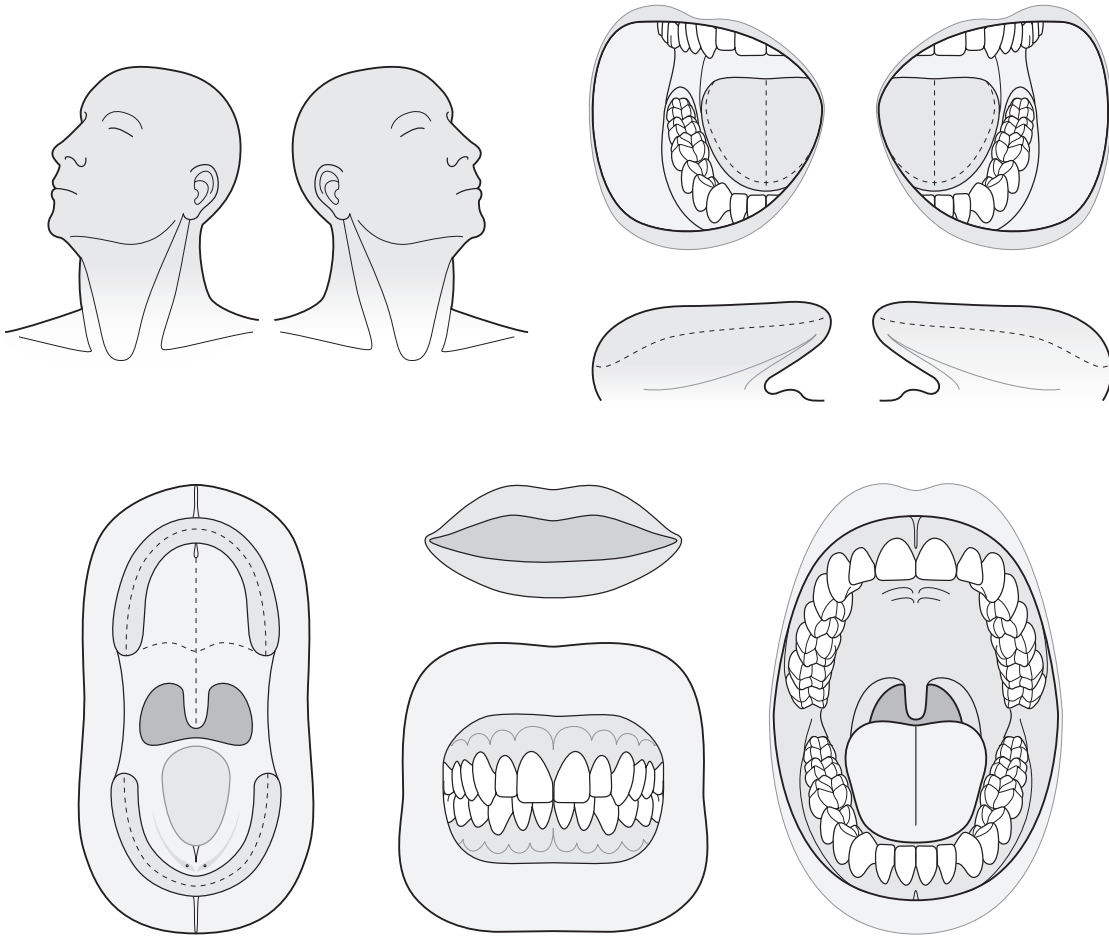
Directions: Highlight or circle the applicable descriptors

(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermilion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
(B) Border	<i>Well-demarcated:</i> Easy to see where lesion begins and ends <i>Poorly-demarcated:</i> Difficult to see where lesion begins and ends <i>Regularly shaped:</i> Uniform border <i>Irregularly shaped:</i> Border not uniform
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(T) Type	Nonpalpable Flat Lesions <i>Macule</i> - Flat discolored spot, less than 1cm in size <i>Patch</i> - Flat discolored spot, larger than 1cm in size Palpable, Elevated, Solid Masses <i>Papule</i> - Solid raised lesion, less than 1cm in diameter <i>Plaque</i> - Superficial raised lesion, larger than 1cm in diameter <i>Nodule</i> - Marble-like lesion larger than 1cm in diameter <i>Wheal</i> - Localized area of skin edema Fluid-Filled Lesions <i>Vesicle</i> - Small blister filled with clear fluid, less than 1cm in diameter <i>Bulla</i> - Larger fluid-filled lesion, larger than 1cm in diameter <i>Pustule</i> - Small raised lesion filled with pus Loss of Skin or Mucosal Surface <i>Erosion</i> - Loss of top layer of skin or mucosa <i>Ulcer</i> - Craterlike lesion where top two layers of skin or mucosa are lost <i>Fissure</i> - A linear crack

Figure 13-48A. Page I of Lesion Descriptor Worksheet for Mrs. Doi.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 13-48B. Page 2 of Lesion Descriptor Worksheet for Mrs. Doi.

FICTITIOUS PATIENT CASE E: Miss Esther Eads



Figure 13-49. Findings at commissures of the lips.

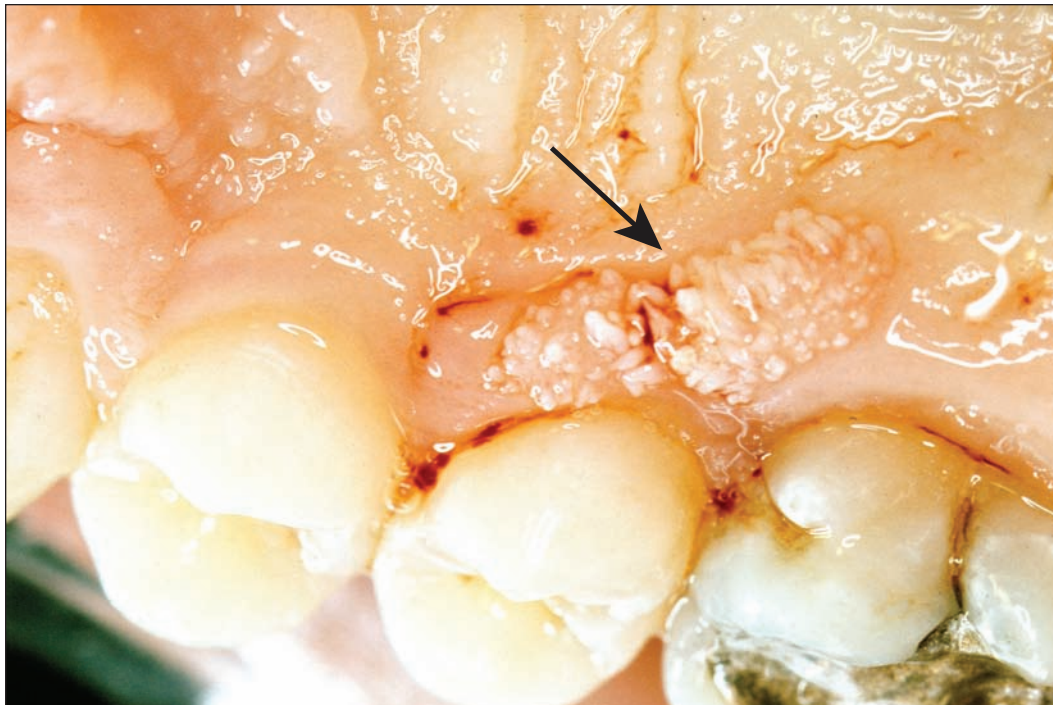


Figure 13-50. Finding on the right side of the palate.

Lesion Descriptor Worksheet

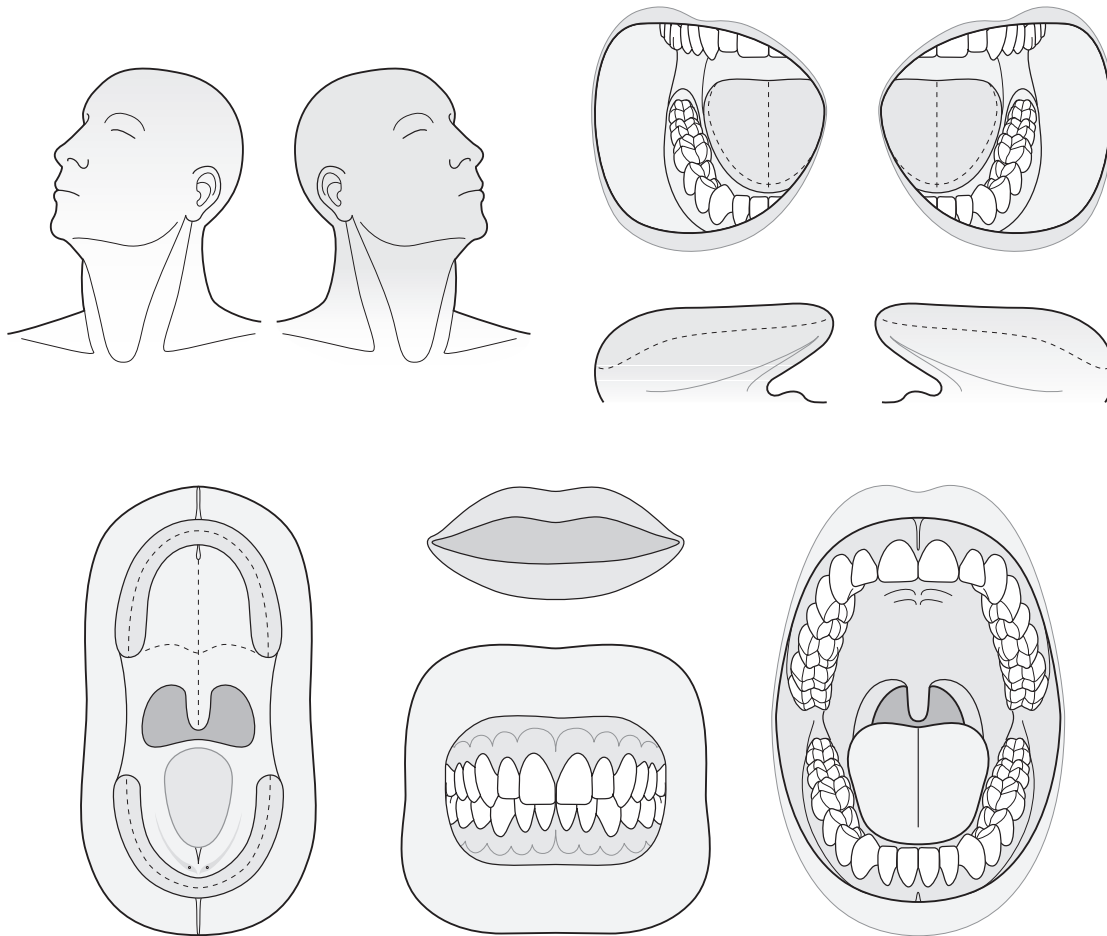
Directions: Highlight or circle the applicable descriptors

(A) Anatomic Location	<i>Head:</i> Scalp, eye, ear, nose, cheek, chin, neck; right or left side <i>Neck:</i> Midline, right, left; near certain anatomic structure <i>Lip:</i> Upper, lower, commissure, vermillion border; labial mucosa <i>Buccal mucosa:</i> Parotid papilla; mucobuccal fold; near tooth # <i>Gingiva:</i> Free, attached; near tooth # <i>Tongue:</i> Anterior-third, middle-third, posterior-third; dorsal, ventral, right lateral, left lateral <i>Floor of mouth:</i> Lingual frenum, sublingual folds, sublingual caruncle; near tooth # <i>Palate:</i> Hard, soft; midline, incisive papilla; right side, left side <i>Oropharynx:</i> Pillars, midline, uvula
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(C) Color Change Configuration	<i>Color:</i> Red, white, red and white, blue, yellow, brown, black <i>Lesion pattern:</i> Single lesion or multiple lesions (discrete, grouped, confluent, linear)
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Figure 13-51A. Page 1 of Lesion Descriptor Worksheet for Miss Eads.

Lesion Descriptor Worksheet

Directions: Draw the lesion(s) on the appropriate illustration, showing the anatomic location, relative shape, and size.



Develop a Chart Entry: Using each descriptor circled and the location indicated on this worksheet, develop a written description of the lesion(s). After you have perfected the written description, enter it in the paper or computerized patient chart. Remember the **A, B, C, D, T** plan for formulating a description.

Figure 13-51B. Page 2 of Lesion Descriptor Worksheet for Miss Eads.

SECTION 6 QUICK QUESTIONS

1. According to the Oral Cancer Foundation, what is the death rate from oral cancer in the United States?
 - A. 24 people die each day
 - B. 365 people die each year
 - C. One person dies each month
 - D. 265 people die each year
2. Of the oral structures, which has the highest incidence rate of cancer?
 - A. Palate
 - B. Buccal mucosa
 - C. Tongue
 - D. Floor of the mouth
3. Which of the following is/are known risk factor(s) for oral cancer?
 - A. Smoking
 - B. Chewing tobacco
 - C. Alcohol consumption
 - D. All of the above
4. Of the following lesions, which is the LEAST likely to signal oral cancer?
 - A. White lesions
 - B. Brown lesions
 - C. Red lesions
 - D. All of the above are likely to be precancerous
5. Erythroplakia have the greatest potential for becoming precancerous. Any white or red lesion that does not resolve in 2 weeks should be biopsied to obtain a definitive diagnosis.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
6. Which of the following changes in the soft tissue should be recorded in the patient chart or computerized record?
 - A. Color
 - B. Texture
 - C. Swelling
 - D. All of the above

SECTION 7 SKILL CHECK

SKILL CHECKLIST ORAL EXAMINATION

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E**. Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Subgroup 1: Visual Inspection of the Lips and Vermillion Border Provides patient with safety glasses and positions patient in the supine position.		
Dons gloves.		
Visually inspects the lips and vermillion border.		
Subgroup 2: Inspection of the Oral Cavity and Mucosal Surfaces Adjusts the dental unit light so that the oral cavity is well illuminated.		
Visually inspects the oral cavity and oropharynx. Identifies any condition that would cause the oral examination to be modified or postponed.		
Visually inspects the upper and lower lips.		
Visually inspects the buccal mucosa of both cheeks.		
Subgroup 3: Palpation of the Lips and Cheeks Palpates the upper and lower lips.		
Palpates the buccal mucosa of both cheeks.		
Subgroup 4: Floor of the Mouth Inspects the anterior region of the mouth.		
Retracts the tongue and inspects the posterior region of the floor of the mouth.		
Palpates the floor of the mouth.		
Subgroup 5: Salivary Gland Function Examines the parotid salivary ducts in both sides of the mouth.		
Examines the submandibular and sublingual ducts.		

(Note Skill Checklist continues on the next page)

SKILL CHECKLIST ORAL EXAMINATION

Criteria:	S	E
Subgroup 6: The Tongue		
Inspects the ventral surface of the tongue.		
Inspects the dorsal surface of the tongue.		
Inspects the lateral surfaces of the tongue.		
Palpates the tongue.		
Subgroup 7: Palate, Tonsils, and Oropharynx		
Visually inspects the palate.		
Palpates the hard and soft palate.		
Inspects the tonsils and oropharynx.		
Documents notable findings in the patient chart or computerized record.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total “S”s in each I column.		
Sum of “S”s _____ divided by Total Points Possible (22) equals the Percentage Grade _____		

SKILL CHECKLIST **ROLE-PLAY ORAL EXAMINATION**

Student: _____

Evaluator: _____

Date: _____

Roles:

Student 1 = Plays the role of a fictitious patient.

Student 2 = Plays the role of the clinician.

Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains what is to be done.		
Reports notable findings to the patient. As needed, makes referral to a physician or dental specialist.		
Encourages patient questions before and during the oral examination.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level avoiding dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct medical and dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total " S "s in each I column.		
Sum of " S "s _____ divided by Total Points Possible (7) equals the Percentage Grade _____		

NOTES

NOTES

MODULE 14

Gingival Description

MODULE OVERVIEW

This module presents a systematic approach to describing the characteristics of the gingiva. The ability to formulate a concise accurate written or verbal description of the gingiva is an important component of patient assessment.

This module covers the gingival description, including:

- Characteristics of the gingiva in health
- Changes in gingival characteristics in disease
- Formulating a description of gingival characteristics

Before beginning this module, you should have completed the chapter on the gingiva in a dental theory textbook.

MODULE OUTLINE

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	Changes in Disease	
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	Gingival Characteristics Chart: Mandibular Arch	
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SKILL GOALS

- Describe characteristics of the gingiva in health and disease.
- Recognize gingival characteristics that are indicative of health and disease.
- Define the key terms used in this module.

Papillary	Bulbous
Marginal	Blunted
Diffuse	Cratered
Enlarged	Nodular
Coronal to cementoenamel junction	Exudate
Apical to cementoenamel junction	
- Provide information to the patient about gingival characteristics and any notable findings.
- Accurately communicate gingival characteristics to a clinical instructor. Discuss the implications of notable findings.
- Given a photograph of a sextant of the mouth, use the Gingival Descriptor Worksheet to identify characteristics of the gingiva.
- Demonstrate knowledge of gingival characteristics by applying information from this module to the fictitious patient cases A to E in this module.

SECTION 1 LEARNING TO LOOK AT THE GINGIVA

The ability to formulate a concise, accurate written or verbal description of the gingiva is an important component of patient assessment process. The following characteristics of the gingiva should be assessed:

1. Color
2. Size
3. Position of margin
4. Shape of margins and papillae
5. Texture and consistency
6. Bleeding and/or exudate

CHARACTERISTICS OF THE GINGIVA IN HEALTH



Figure 14-1. Healthy gingival tissues—facial aspect. This gingival tissue exhibits all the signs of health: tissue that fits snugly around the tooth and tapers to meet the tooth at a fine edge, pointed papillae that completely fill the embrasure spaces, and firm, resilient tissue. (Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.)



Figure 14-2. Healthy gingival tissues—lingual aspect. This gingival tissue on the lingual aspect of the maxillary arch is an excellent example of health. (Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.)

TABLE 14-1. Characteristics of the Gingiva

Characteristic	Healthy Tissue	Changes in Disease
Color	Uniform pink color Pigmented	Bright red, bluish purple, white, or pale pink
Size	Fits snugly around the tooth	Enlarged
Position of margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	• More than 2 mm coronal to CEJ • Apical to CEJ
Shape	Marginal gingiva: meets the tooth in a tapered or slightly rounded edge Interdental papillae: flat, pointed papilla fills the embrasure space between two adjacent teeth	Marginal gingiva: meets the tooth in a rolled, thickened, or irregular edge Interdental papillae: papilla may be bulbous, blunted, cratered, or missing
Texture	Normal Stippled	• Smooth, shiny, no stippling • Firm and nodular (fibrotic)
Consistency	Firm Resilient under compression	• Soft, flaccid • Spongy, puffy • Leathery, not resilient
Bleeding/exudate	No bleeding No exudate	• Bleeding on probing; heavy bleeding upon probing in acute gingivitis • Exudate

CEJ, cementoenamel junction.



Figure 14-3. Color—normal variation. Pigmented areas are commonly visible in the gingival tissues of dark skinned individuals.

CHANGES IN DISEASE



Figure 14-4. Change in color: red tissue.
(Courtesy of Dr. Don Rolfs.)

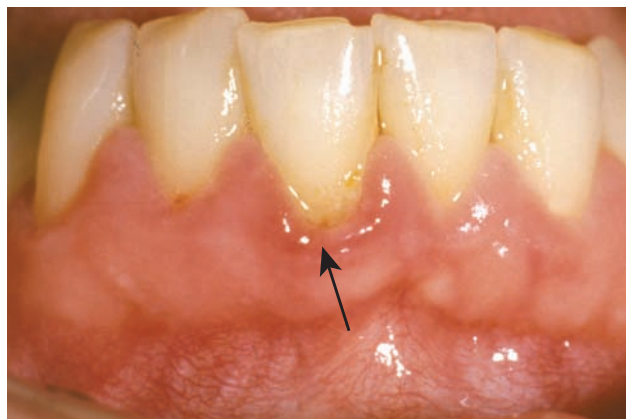


Figure 14-5. Change in color: red margin.
(Courtesy of Dr. Don Rolfs.)



Figure 14-6. Change in color: pale pink or white gingival tissue.



Figure 14-7. Change in size: enlarged tissue.



Figure 14-8. Change in size: enlarged tissue.

Figure 14-9. Change in position of margin:
gingival margin coronal to (above) the
cemento enamel junction (CEJ). (Courtesy of
Dr. Don Rolfs.)



Figure 14-10. Change in position of margin:
gingival margin coronal to (above) the
cemento enamel junction (CEJ).

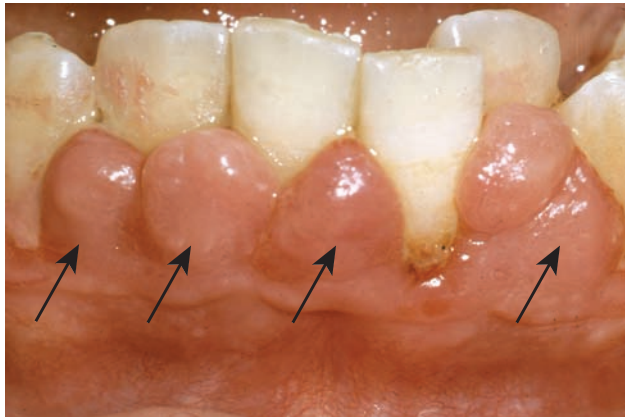


Figure 14-11. Change in position of margin:
gingival margin apical to (below) the cemen-
to enamel junction (CEJ).

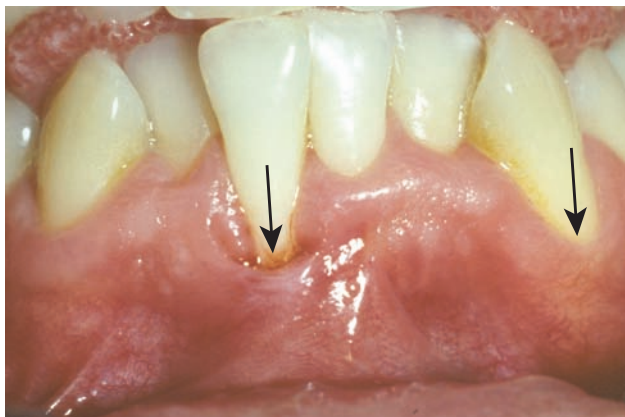




Figure 14-12. Change in position of margin: gingival margin apical to (below) the cemento-enamel junction (CEJ).



Figure 14-13. Change in shape of margin: gingival margin thickened and rolled. (Courtesy of Dr. Don Rolfs.)

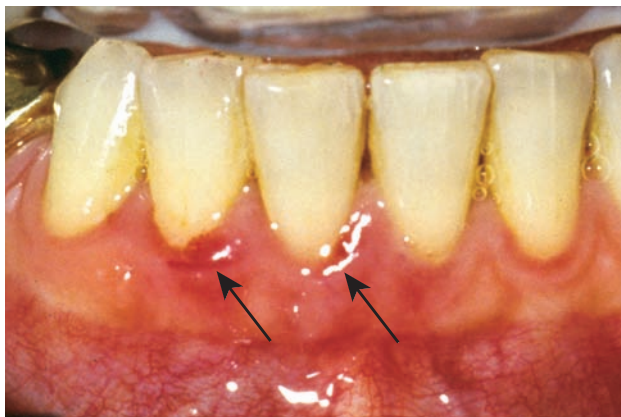


Figure 14-14. Change in shape of margin: gingival margin thickened and rolled.

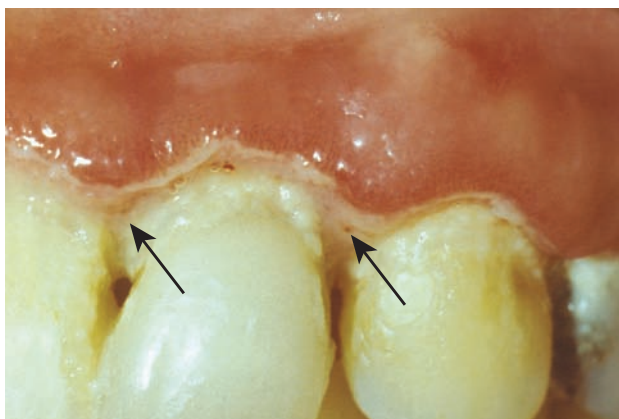
Figure 14-15. Change in shape of papilla:
bulbous papillae.



Figure 14-16. Change in shape of papilla:
bulbous papilla.



Figure 14-17. Change in shape of papilla:
cratered papillae. (Courtesy of Dr. Don Rolfs.)



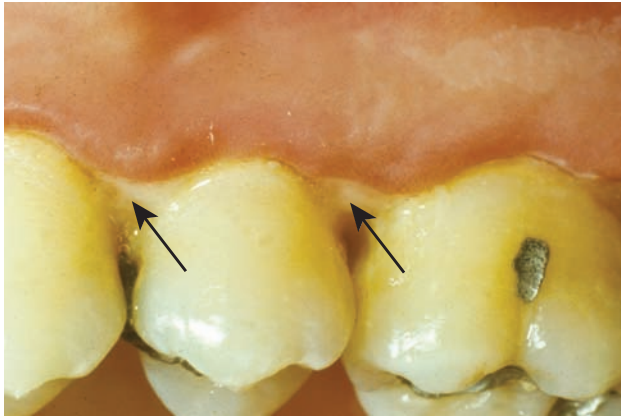


Figure 14-18. Change in shape of papilla:
Cratered papillae.



Figure 14-19. Change in shape of papilla:
missing and blunted papillae.



Figure 14-20. Change in shape of papilla:
missing, blunted papillae.

Figure 14-21. Change in texture and consistency: tissue soft and flaccid (lacking firmness), spongy. (Courtesy of Dr. Don Rolfs.)



Figure 14-22. Change in texture and consistency: smooth, shiny tissue.



Figure 14-23. Change in texture and consistency: smooth, shiny tissue.



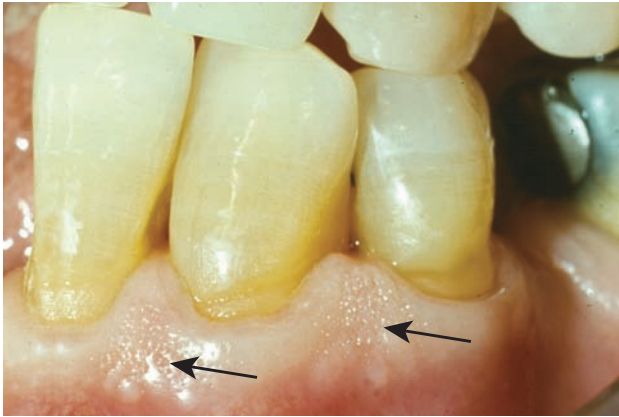


Figure 14-24. Change in texture and consistency: nodular (fibrotic) tissue.

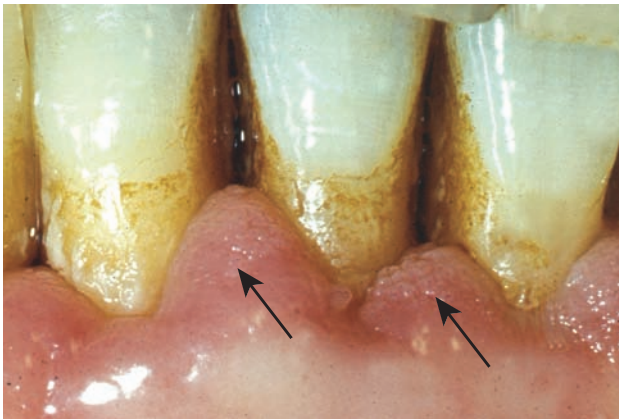


Figure 14-25. Change in texture and consistency: nodular (fibrotic) tissue.
(Courtesy of Dr. Don Rolfs.)

SECTION 2 PEAK PROCEDURE

Procedure 14-1. Determining Gingival Characteristics

ACTION	RATIONALE
1. Choose sextant and aspect. Select one sextant of the mouth for assessment; if applicable, choose the sextant that shows the most tissue changes. Select either the facial or lingual aspect of this sextant for examination.	• Focusing your attention on a specific aspect (facial or lingual) of one sextant is more efficient than trying to examine the entire mouth at one time.
2. Worksheet. Use the Gingival Descriptor Worksheet from the Ready References section of this module. Circle or highlight the words that describe the facial or lingual aspect of the sextant. - Assess the color of the tissue. Changes in color may involve only the margin (marginal) or the papilla (papillary). Changes that involve both the marginal and papillary tissue are indicated as diffuse color changes. - Assess the size of the tissue. - Assess the position of the gingival margin. - Assess the shape of the margins and papillae in the sextant.	• The Gingival Descriptor Worksheet is helpful in identifying the gingival characteristics present in the sextant. • Changes in gingival characteristics may be indicators of disease.
3. Use compressed air and a periodontal probe to assess the texture and consistency and enter your findings on the worksheet. - Healthy tissue is resilient when pressed lightly with the side (length) of a periodontal probe. - Soft, spongy tissue will retain the shape of the probe for several seconds. - Leathery, nodular tissue is very firm and not resilient when the tissue is pressed lightly with the probe.	• The texture and consistency of the tissue provides important clues about the health of the tissue. Normal tissue is very resilient. Soft, spongy tissue may be an indicator of gingivitis. Leathery, nodular tissue may be an indicator of periodontitis.

(continued)

Procedure 14-1. Determining Gingival Characteristics (continued)

ACTION	RATIONALE
4. Observe the sextant to check for any areas of spontaneous bleeding. Use a periodontal probe to check for bleeding upon probing and/or exudate.	• Bleeding and/or exudate are important indicators of inflammation.
5. Chart. Complete a Gingival Characteristics Chart from the Ready References section of this module. You will need a red/blue pencil and a yellow highlighter to complete this chart. You will be entering information for the same sextant and aspect selected for the Gingival Descriptor Worksheet. a. Draw the location of the gingival margin on the chart. b. Indicate areas of gingival recession with the yellow highlighter. c. Enter gingival margin findings in red pencil at the root apices. d. Enter papillae findings in blue pencil between the teeth near the root area.	• The Gingival Characteristics Chart is helpful in identifying the gingival characteristics present in the sextant. • Changes in gingival characteristics may be indicators of disease.

SECTION 3 READY REFERENCES

Gingival Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

In the last column list your findings:

- Indicate if a characteristic is localized or generalized
- If localized, note:
 - the tooth number, or
 - the aspect, facial or lingual, of the sextant(s) or quadrant(s) exhibiting the characteristic.
- If bleeding is evident, indicate extent as light, moderate, or heavy

CHARACTERISTIC	NORMAL DESCRIPTORS	DISEASE DESCRIPTORS		LIST FINDINGS
Color	Pink Pigmented	Red Bluish purple White Pale pink	<i>Distribution:</i> Papillary Marginal Diffuse	
Size	Fits snugly around tooth	Enlarged		
Position of Margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	More than 2 mm coronal to the CEJ Apical to the CEJ		
Shape of Margin	Tapered or slightly rounded edge Fits snugly around tooth	Thickened edge Rolled edge Irregular edge		
Shape of Papilla	Flat, pointed papilla Fills interproximal space	Bulbous papilla Blunted papilla Cratered papilla Missing papilla		
Texture	Normal Stippled	Smooth and shiny Nodular (fibrotic)		
Consistency	Firm, resilient	Soft, flaccid Spongy, puffy Leathery, not resilient		
Bleeding, Exudate	No bleeding No exudate (pus)	Spontaneous bleeding Bleeding on probing Exudate		

Figure 14-26. Gingival Descriptor Worksheet.

Gingival Characteristics Chart: Maxillary Arch

Case: _____

Aspect (circle): Facial Lingual

Directions: Use a red/blue pencil and a yellow highlighter to indicate the following:

With blue pencil draw the location of the gingival margin

With yellow highlighter show any areas of recession

Key: Gingival Margins Findings Enter in red pencil at the root apex	
S	Snugly around tooth
E	Enlarged
T	Tapered or slightly rounded edge
R	Rolled, thickened edge
I	Irregular edge
N	Normal texture
S h	Shiny, smooth texture
N d	Nodular texture (fibrotic)
F	Firm, resilient
S o	Soft, spongy
L	Leathery, not resilient

Key: Papillae Findings Enter in blue pencil between the teeth near root area	
F	Fills the interproximal space
F I	Flat, pointed
B b	Bulbous
B I	Blunted
C	Cratered
M	Missing

FACIAL											
(R)				(L)							

LINGUAL											
(L)				(R)							

Figure 14-27. Gingival Characteristics Chart: Maxillary Arch.

Gingival Characteristics Chart: Mandibular Arch

Case: _____

Aspect (circle): Facial Lingual

Directions: Use a red/blue pencil and a yellow highlighter to indicate the following:

With blue pencil draw the location of the gingival margin

With yellow highlighter show any areas of recession

Key: Gingival Margins Findings

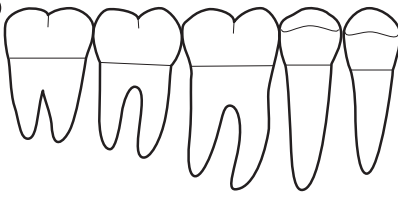
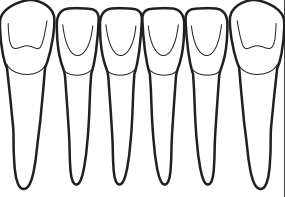
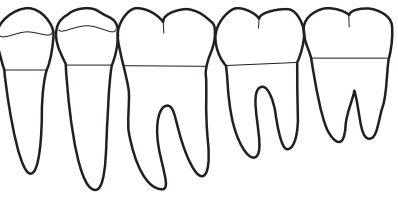
Enter in red pencil at the root apex

S	Snugly around tooth
E	Enlarged
T	Tapered or slightly rounded edge
R	Rolled, thickened edge
I	Irregular edge
N	Normal texture
Sh	Shiny, smooth texture
Nd	Nodular texture (fibrotic)
F	Firm, resilient
So	Soft, spongy
L	Leathery, not resilient

Key: Papillae Findings

Enter in blue pencil between the teeth near root area

F	Fills the interproximal space
FI	Flat, pointed
Bb	Bulbous
BI	Blunted
C	Cratered
M	Missing

LINGUAL											
(L)				(R)							

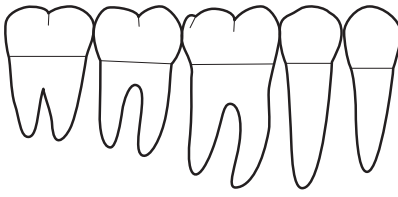
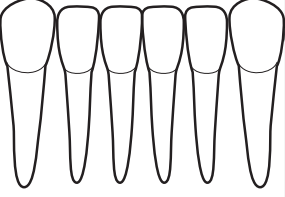
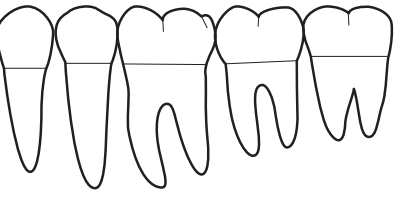
FACIAL											
(R)				(L)							

Figure 14-28. Gingival Characteristics Chart: Mandibular Arch.

Ready Reference 14-1. Internet Resources

<http://www.perio.org/consumer/2a.html>

The website of the **American Academy of Periodontology** link to information about periodontal diseases.

<http://www.perio.org/consumer/gingivitis.htm>

The website of the **American Academy of Periodontology** link to information about gingivitis.

<http://www.bsperio.org/showpage.asp?id5patients>

Information for patients about periodontal disease on the website of the **British Society of Periodontology**.

<http://www.temple.edu/dentistry/perio/periohistology/index.html>

Free online course on the microscopic anatomy of the periodontium sponsored by **Temple University** and the **University of Pennsylvania**.

<http://www.cap-acp.ca/en/index.html>

The website of the **Canadian Academy of Periodontology** has a wealth of information on the periodontium, gingivitis, periodontitis, the periodontal examination, and the link between systemic health and the periodontitis.

<http://www.nlm.nih.gov/medlineplus/ency/article/001056.htm>

Illustrations, causes, prevention, and treatment of gingivitis from the **National Library of Medicine**.

<http://www.umanitoba.ca/outreach/wisdomtooth/stagesof.htm>

Information on the stages of gingivitis and periodontitis from the **University of Manitoba, School of Dental Hygiene**.

<http://www.umanitoba.ca/outreach/wisdomtooth/pregnanc.htm>

Information on pregnancy gingivitis from the **University of Manitoba, School of Dental Hygiene**.

<http://www.umanitoba.ca/outreach/wisdomtooth/faqs.htm>

Frequently asked questions on the website of the **University of Manitoba, School of Dental Hygiene**. Questions covered include information on plaque, gingivitis, and periodontitis.

SECTION 4 THE HUMAN ELEMENT

Box 14-1. Through the Eyes of a Student

I was seeing Mr. L, a patient that I had seen 6 months ago. Before starting to write up a gingival description, I looked at the one I had done 6 months ago. Since the last time, we have covered gingival descriptors more in class. I realized that I now knew many more gingival descriptors and what they meant and how to use them.

The gingival description from six months ago did not paint a very accurate picture of Mr. L's gingiva. I realized my description from last time would not be of any help today. Using the correct gingival descriptors, I wrote a description that really put into words what the gingiva looks like. At this moment, I realized for the first time how much I had learned in 6 months and how much better I understood the appearance of the gingiva. I really felt proud of myself at that moment.

Kim, student
South Florida Community College

TABLE 14-2. English to Spanish Phrase List for Gingival Description

Next, I will look at the color, contours, and texture of your gum tissue.	Voy a mirar el color, contorno, y textura de la tejida en su encía.
Just relax. This examination is not painful and takes only a few minutes.	No tenga miedo. La examinación no duele, y solamente toma unos minutos.
Please tilt your head forward (back).	Por favor incline su cabeza hacia adelante. Por favor incline su cabeza para atrás.
Please turn your head to the right (left).	Por favor vuelta su cabeza para la derecha. Por favor vuelta su cabeza para la izquierda.
Please tilt your head to the right (left).	Por favor incline su cabeza para la derecha. Por favor incline su cabeza para la izquierda.
Please look straight ahead.	Por favor mire hacia el frente.
There are several areas of gum tissue that I am concerned about. I will point them out to you. Please hold this mirror.	Hay varias áreas de la tejida en la encía que me preocupan. Aguarde este espejo, y se las voy a apuntar.
Healthy gum tissue is pink in color.	Tejida saludable es rosada en color.
Areas of pigmentation are normal on the gum tissues.	Áreas de pigmentación son normal en las tejidas de la encía.
The tissue is _____ in this area. This is not normal. red blue purple swollen leathery	Las tejidas es _____ en esta área. Esto no es normal. Roja Azul Morado Hinchado Textura de cuero
You and I will work together as a team to improve the health of your gum tissues.	Vamos a trabajar juntos para mejorar la salud de las tejidas de su encías.
I am going to get my clinic instructor.	Voy a buscar a mi instructor.

SECTION 5 PRACTICAL FOCUS—FICTITIOUS PATIENT CASES

DIRECTIONS:

- Use the steps outlined in Procedure 14-1, the Gingival Descriptor Worksheet, and Gingival Characteristics Chart to develop descriptions for each of the patient cases. Example completed forms are shown on the following pages.
- In thinking about the health status of the gingival tissues in this module, you should take into account the health history and over-the-counter/prescription drug information that were revealed for each patient in previous modules. For each patient, answer the question, “Is there any connection between the gingival characteristics observed and the patient’s health history or drug information?”
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.

Gingival Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

In the last column list your findings:

- Indicate if a characteristic is localized or generalized
- If localized, note:
 - the tooth number, or
 - the aspect, facial or lingual, of the sextant(s) or quadrant(s) exhibiting the characteristic.
- If bleeding is evident, indicate extent as light, moderate, or heavy

CHARACTERISTIC	NORMAL DESCRIPTORS	DISEASE DESCRIPTORS	LIST FINDINGS
Color	Pink Pigmented	Red Bluish purple White Pale pink Distribution: Papillary Marginal Diffuse	RED-MARGINAL: #9, 10 BLUISH-MARGINAL: 8 BLUISH-PAPILLARY: 8-7
Size	Fits snugly around tooth	Enlarged	ENLARGED: ALL
Position of Margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	More than 2 mm coronal to the CEJ Apical to the CEJ	CORONAL TO CEJ: ALL
Shape of Margin	Tapered or slightly rounded edge Fits snugly around tooth	Thickened edge Rolled edge Irregular edge	THICKENED/ROLLED: ALL
Shape of Papilla	Flat, pointed papilla Fills interproximal space	Bulbous papilla Blunted papilla Cratered papilla Missing papilla	BULBOUS: ALL
Texture	Normal Stippled	Smooth and shiny Nodular (fibrotic)	NODULAR: ALL
Consistency	Firm, resilient	Soft, flaccid Spongy, puffy Leathery, not resilient	LEATHERY: ALL
Bleeding, Exudate	No bleeding No exudate (pus)	Spontaneous bleeding Bleeding on probing Exudate	SPONTANEOUS: #9

Figure 14-29. Example of completed worksheet. This example shows a completed Gingival Descriptor Worksheet for fictitious Patient Z.

FICTITIOUS PATIENT CASE A: Mr. Alan Ascari:



Figure 14-31. Maxillary right posterior sextant, facial aspect.

Indicate any connection between the gingival characteristics observed and the patient's health history or drug information:

Gingival Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

In the last column list your findings:

- Indicate if a characteristic is localized or generalized
- If localized, note:
 - the tooth number, or
 - the aspect, facial or lingual, of the sextant(s) or quadrant(s) exhibiting the characteristic.
- If bleeding is evident, indicate extent as light, moderate, or heavy

CHARACTERISTIC	NORMAL DESCRIPTORS	DISEASE DESCRIPTORS		LIST FINDINGS
Color	Pink Pigmented	Red Bluish purple White Pale pink	<i>Distribution:</i> Papillary Marginal Diffuse	
Size	Fits snugly around tooth	Enlarged		
Position of Margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	More than 2 mm coronal to the CEJ Apical to the CEJ		
Shape of Margin	Tapered or slightly rounded edge Fits snugly around tooth	Thickened edge Rolled edge Irregular edge		
Shape of Papilla	Flat, pointed papilla Fills interproximal space	Bulbous papilla Blunted papilla Cratered papilla Missing papilla		
Texture	Normal Stippled	Smooth and shiny Nodular (fibrotic)		
Consistency	Firm, resilient	Soft, flaccid Spongy, puffy Leathery, not resilient		
Bleeding, Exudate	No bleeding No exudate (pus)	Spontaneous bleeding Bleeding on probing Exudate		

Figure 14-32. Gingival Descriptor Worksheet for Mr. Ascari.

Gingival Characteristics Chart: Maxillary Arch

Case: _____

Aspect (circle): Facial Lingual

Directions: Use a red/blue pencil and a yellow highlighter to indicate the following:

With blue pencil draw the location of the gingival margin

With yellow highlighter show any areas of recession

Key: Gingival Margins Findings Enter in red pencil at the root apex	
S	Snugly around tooth
E	Enlarged
T	Tapered or slightly rounded edge
R	Rolled, thickened edge
I	Irregular edge
N	Normal texture
Sh	Shiny, smooth texture
Nd	Nodular texture (fibrotic)
F	Firm, resilient
So	Soft, spongy
L	Leathery, not resilient

Key: Papillae Findings Enter in blue pencil between the teeth near root area	
F	Fills the interproximal space
F I	Flat, pointed
B b	Bulbous
B I	Blunted
C	Cratered
M	Missing

FACIAL															
(R)															(L)

LINGUAL															
(L)															(R)

Figure 14-33. Gingival Characteristics Chart for Mr. Ascari.

FICTITIOUS PATIENT CASE B: Bethany Biddle

Figure 14-34. Facial aspect of maxillary anterior sextant.

Indicate any connection between the gingival characteristics observed and the patient's health history or drug information:

Gingival Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

In the last column list your findings:

- Indicate if a characteristic is localized or generalized
- If localized, note:
 - the tooth number, or
 - the aspect, facial or lingual, of the sextant(s) or quadrant(s) exhibiting the characteristic.
- If bleeding is evident, indicate extent as light, moderate, or heavy

CHARACTERISTIC	NORMAL DESCRIPTORS	DISEASE DESCRIPTORS		LIST FINDINGS
Color	Pink Pigmented	Red Bluish purple White Pale pink	<i>Distribution:</i> Papillary Marginal Diffuse	
Size	Fits snugly around tooth	Enlarged		
Position of Margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	More than 2 mm coronal to the CEJ Apical to the CEJ		
Shape of Margin	Tapered or slightly rounded edge Fits snugly around tooth	Thickened edge Rolled edge Irregular edge		
Shape of Papilla	Flat, pointed papilla Fills interproximal space	Bulbous papilla Blunted papilla Cratered papilla Missing papilla		
Texture	Normal Stippled	Smooth and shiny Nodular (fibrotic)		
Consistency	Firm, resilient	Soft, flaccid Spongy, puffy Leathery, not resilient		
Bleeding, Exudate	No bleeding No exudate (pus)	Spontaneous bleeding Bleeding on probing Exudate		

Figure 14-35. Gingival Descriptor Worksheet for Miss Biddle.

DIRECTIONS: To use the Gingival Characteristics Chart for a patient with a mixed dentition, enter the letter of the primary tooth on the crown of the permanent tooth and cross out any missing teeth.

Gingival Characteristics Chart: Maxillary Arch

Case: _____

Aspect (circle): Facial Lingual

Directions: Use a red/blue pencil and a yellow highlighter to indicate the following:

With blue pencil draw the location of the gingival margin

With yellow highlighter show any areas of recession

Key: Gingival Margins Findings Enter in red pencil at the root apex	
S	Snugly around tooth
E	Enlarged
T	Tapered or slightly rounded edge
R	Rolled, thickened edge
I	Irregular edge
N	Normal texture
Sh	Shiny, smooth texture
Nd	Nodular texture (fibrotic)
F	Firm, resilient
So	Soft, spongy
L	Leathery, not resilient

Key: Papillae Findings Enter in blue pencil between the teeth near root area	
F	Fills the interproximal space
FI	Flat, pointed
Bb	Bulbous
BI	Blunted
C	Cratered
M	Missing

FACIAL												
(R)	(L)	Simplified representation of the tooth diagrams										(L)

LINGUAL												
(L)	(R)	Simplified representation of the tooth diagrams										(R)

Figure 14-36. Gingival Characteristics Chart for Miss Biddle.

FICTITIOUS PATIENT CASE C: Mr. Carlos Chavez



Figure 14-37. Facial aspect, maxillary anterior sextant.

Indicate any connection between the gingival characteristics observed and the patient's health history or drug information:

Gingival Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

In the last column list your findings:

- Indicate if a characteristic is localized or generalized
- If localized, note:
 - the tooth number, or
 - the aspect, facial or lingual, of the sextant(s) or quadrant(s) exhibiting the characteristic.
- If bleeding is evident, indicate extent as light, moderate, or heavy

CHARACTERISTIC	NORMAL DESCRIPTORS	DISEASE DESCRIPTORS		LIST FINDINGS
Color	Pink Pigmented	Red Bluish purple White Pale pink	<i>Distribution:</i> Papillary Marginal Diffuse	
Size	Fits snugly around tooth	Enlarged		
Position of Margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	More than 2 mm coronal to the CEJ Apical to the CEJ		
Shape of Margin	Tapered or slightly rounded edge Fits snugly around tooth	Thickened edge Rolled edge Irregular edge		
Shape of Papilla	Flat, pointed papilla Fills interproximal space	Bulbous papilla Blunted papilla Cratered papilla Missing papilla		
Texture	Normal Stippled	Smooth and shiny Nodular (fibrotic)		
Consistency	Firm, resilient	Soft, flaccid Spongy, puffy Leathery, not resilient		
Bleeding, Exudate	No bleeding No exudate (pus)	Spontaneous bleeding Bleeding on probing Exudate		

Figure 14-38. Gingival Descriptor Worksheet for Mr. Chavez.

Gingival Characteristics Chart: Maxillary Arch

Case: _____

Aspect (circle): Facial Lingual

Directions: Use a red/blue pencil and a yellow highlighter to indicate the following:

With blue pencil draw the location of the gingival margin

With yellow highlighter show any areas of recession

Key: Gingival Margins Findings Enter in red pencil at the root apex	
S	Snugly around tooth
E	Enlarged
T	Tapered or slightly rounded edge
R	Rolled, thickened edge
I	Irregular edge
N	Normal texture
S h	Shiny, smooth texture
N d	Nodular texture (fibrotic)
F	Firm, resilient
S o	Soft, spongy
L	Leathery, not resilient

Key: Papillae Findings Enter in blue pencil between the teeth near root area	
F	Fills the interproximal space
F I	Flat, pointed
B b	Bulbous
B I	Blunted
C	Cratered
M	Missing

FACIAL												
(R)												(L)

LINGUAL												
(L)												(R)

Figure 14-39. Gingival Characteristic Chart for Mr. Chavez.

FICTITIOUS PATIENT CASE D: Mrs. Donna Doi

Figure 14-40. Facial aspect, maxillary anterior sextant.

Indicate any connection between the gingival characteristics observed and the patient's health history or drug information:

Gingival Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

In the last column list your findings:

- Indicate if a characteristic is localized or generalized
- If localized, note:
 - the tooth number, or
 - the aspect, facial or lingual, of the sextant(s) or quadrant(s) exhibiting the characteristic.
- If bleeding is evident, indicate extent as light, moderate, or heavy

CHARACTERISTIC	NORMAL DESCRIPTORS	DISEASE DESCRIPTORS		LIST FINDINGS
Color	Pink Pigmented	Red Bluish purple White Pale pink	<i>Distribution:</i> Papillary Marginal Diffuse	
Size	Fits snugly around tooth	Enlarged		
Position of Margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	More than 2 mm coronal to the CEJ Apical to the CEJ		
Shape of Margin	Tapered or slightly rounded edge Fits snugly around tooth	Thickened edge Rolled edge Irregular edge		
Shape of Papilla	Flat, pointed papilla Fills interproximal space	Bulbous papilla Blunted papilla Cratered papilla Missing papilla		
Texture	Normal Stippled	Smooth and shiny Nodular (fibrotic)		
Consistency	Firm, resilient	Soft, flaccid Spongy, puffy Leathery, not resilient		
Bleeding, Exudate	No bleeding No exudate (pus)	Spontaneous bleeding Bleeding on probing Exudate		

Figure 14-41. Gingival Descriptor Worksheet for Mrs. Doi.

Gingival Characteristics Chart: Maxillary Arch

Case: _____

Aspect (circle): Facial Lingual

Directions: Use a red/blue pencil and a yellow highlighter to indicate the following:

With blue pencil draw the location of the gingival margin

With yellow highlighter show any areas of recession

Key: Gingival Margins Findings Enter in red pencil at the root apex	
S	Snugly around tooth
E	Enlarged
T	Tapered or slightly rounded edge
R	Rolled, thickened edge
I	Irregular edge
N	Normal texture
Sh	Shiny, smooth texture
Nd	Nodular texture (fibrotic)
F	Firm, resilient
So	Soft, spongy
L	Leathery, not resilient

Key: Papillae Findings Enter in blue pencil between the teeth near root area	
F	Fills the interproximal space
FI	Flat, pointed
Bb	Bulbous
BI	Blunted
C	Cratered
M	Missing

FACIAL															
(R)	(L)														
LINGUAL															
(L)	(R)														

Figure 14-42. Gingival Characteristics Chart for Mrs. Doi.

FICTITIOUS PATIENT CASE E: Miss Esther Eads

Figure 14-43. Lingual aspect, mandibular right posterior sextant.

Indicate any connection between the gingival characteristics observed and the patient's health history or drug information:

Gingival Descriptor Worksheet

Directions: Highlight or circle the applicable descriptors

In the last column list your findings:

- Indicate if a characteristic is localized or generalized
- If localized, note:
 - the tooth number, or
 - the aspect, facial or lingual, of the sextant(s) or quadrant(s) exhibiting the characteristic.
- If bleeding is evident, indicate extent as light, moderate, or heavy

CHARACTERISTIC	NORMAL DESCRIPTORS	DISEASE DESCRIPTORS		LIST FINDINGS
Color	Pink Pigmented	Red Bluish purple White Pale pink	<i>Distribution:</i> Papillary Marginal Diffuse	
Size	Fits snugly around tooth	Enlarged		
Position of Margin	Near the CEJ: 1 to 2 mm coronal to the CEJ	More than 2 mm coronal to the CEJ Apical to the CEJ		
Shape of Margin	Tapered or slightly rounded edge Fits snugly around tooth	Thickened edge Rolled edge Irregular edge		
Shape of Papilla	Flat, pointed papilla Fills interproximal space	Bulbous papilla Blunted papilla Cratered papilla Missing papilla		
Texture	Normal Stippled	Smooth and shiny Nodular (fibrotic)		
Consistency	Firm, resilient	Soft, flaccid Spongy, puffy Leathery, not resilient		
Bleeding, Exudate	No bleeding No exudate (pus)	Spontaneous bleeding Bleeding on probing Exudate		

Figure 14-44. Gingival Descriptor Worksheet for Miss Eads.

Gingival Characteristics Chart: Mandibular Arch

Case: _____

Aspect (circle): Facial Lingual

Directions: Use a red/blue pencil and a yellow highlighter to indicate the following:

With blue pencil draw the location of the gingival margin

With yellow highlighter show any areas of recession

Key: Gingival Margins Findings Enter in red pencil at the root apex	
S	Snugly around tooth
E	Enlarged
T	Tapered or slightly rounded edge
R	Rolled, thickened edge
I	Irregular edge
N	Normal texture
S h	Shiny, smooth texture
N d	Nodular texture (fibrotic)
F	Firm, resilient
S o	Soft, spongy
L	Leathery, not resilient

Key: Papillae Findings Enter in blue pencil between the teeth near root area	
F	Fills the interproximal space
F I	Flat, pointed
B b	Bulbous
B I	Blunted
C	Cratered
M	Missing

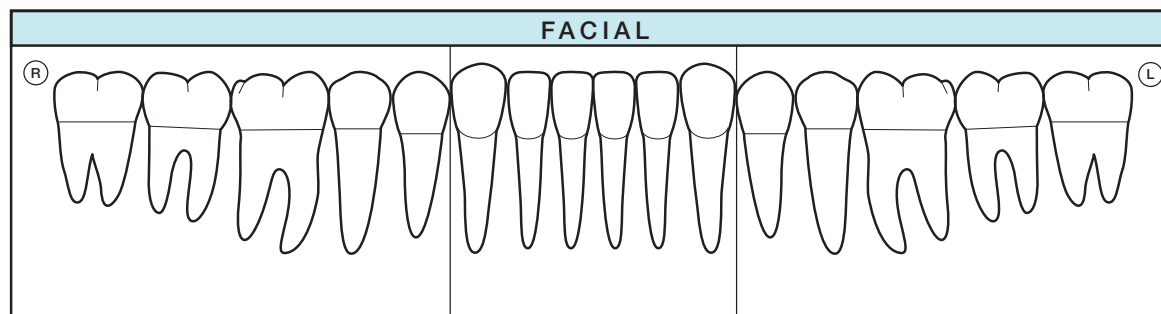
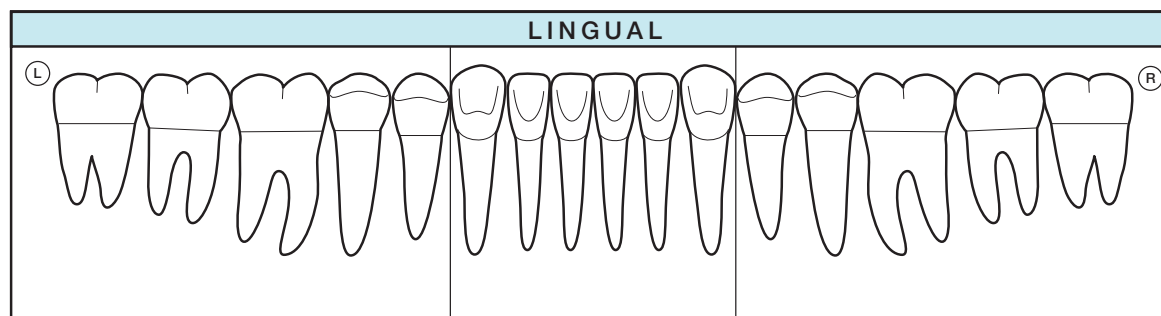


Figure 14-45. Gingival Characteristics Chart for Miss Eads.

SECTION 6 QUICK QUESTIONS

1. The position of the gingival margin often changes in **disease**. The shape of a papilla rarely changes due to **disease**.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
2. In **health**, the gingiva is pink in color. Red tissue is a change that may be seen in **disease**.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
3. Areas of the gingival tissue may have a bluish color in **disease**. The tissue may be a pale pink or white in **disease**.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
4. A bulbous papilla is one that is missing. In **disease**, a papilla may have a cratered appearance.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
5. The position of the gingival margin is apical to the cementoenamel junction (CEJ) when it:
 - A. Covers more of the crown of the tooth than it would in health.
 - B. Covers less of the tooth than is normal in health.
6. In **disease**, the gingival margin meets the tooth in a tapered edge. In **health**, the tissue meets the tooth in a thick, rolled margin.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.

7. In **health**, the tissue fits snugly around the tooth. In **health**, the margin is apical to the CEJ.
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
8. **Healthy** tissue is very firm and not resilient. The tissue can have a nodular texture in **disease**.
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
9. In **health**, the interdental papilla is pointed. In **disease**, the interdental papilla might be missing.
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
10. Most patients are very knowledgeable about the characteristics of healthy gingiva. It is important to point out changes in the gingiva due to disease to the patient.
- A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.

SECTION 7 SKILL CHECK

SKILL CHECKLIST GINGIVAL DESCRIPTION

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Selects the facial or lingual aspect of a sextant that shows the most tissue changes and assesses this area.		
For the selected area, accurately records the color of the gingival tissue on Gingival Descriptor Worksheet.		
Accurately records the size of the gingival tissue on the Gingival Descriptor Worksheet.		
Accurately records the position of the gingival margin on the Gingival Descriptor Worksheet.		
Accurately records the shape of the gingival margin on the Gingival Descriptor Worksheet.		
Accurately records the shape of the papillae on the Gingival Descriptor Worksheet.		
Accurately records the texture of the gingival tissue on the Gingival Descriptor Worksheet.		
Accurately records the consistency of the tissue on the Gingival Descriptor Worksheet.		
Checks for the presence or absence of bleeding and/or exudate. Notes bleeding and/or exudate, if applicable.		
Accurately draws the position of the gingival margin in the selected area on the Gingival Characteristics Chart.		
Indicates areas of recession with a yellow highlighter on the Gingival Characteristics Chart.		
Enters gingival margin findings in red pencil at the root apices on the Gingival Characteristics Chart.		
Enters findings for the papillae in blue pencil between the teeth on the Gingival Characteristics Chart.		
Sum of "S"s _____ divided by Total Points Possible (13) equals the Percentage Grade _____		

(Note Skills Checklist continues on the next page)

SKILL CHECKLIST GINGIVAL DESCRIPTION (continued)

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of a fictitious patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains what is to be done.		
Points out changes in gingival characteristics and explains their significance to the patient.		
Encourages patient questions.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level, avoiding dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total " S "s in each I column.		
Sum of " S "s _____ divided by Total Points Possible (6) equals the Percentage Grade _____		

NOTES

MODULE 15

Mixed Dentition and Occlusion

MODULE OVERVIEW

This module presents a systematic approach to identifying the teeth present in a mixed dentition and for classifying the occlusion.

This module covers:

- Mixed dentitions and how to recognize primary and permanent teeth in the mouth
- Angle's classification of occlusion and how to classify a patient's occlusion
- Additional characteristics of malocclusion and malpositions of individual teeth

Before beginning this module, you should have completed the chapters on the primary and permanent dentitions and Angle's classification of occlusion in a dental anatomy textbook.

MODULE OUTLINE

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SECTION 10 Skill Check

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Technique Skill Checklist: Mixed Dentition

Technique Skill Checklist: Occlusion

Communication Skill Checklist: Mixed Dentition

Communication Skill Checklist: Occlusion

SKILL GOALS

- List the order of eruption of the permanent teeth.
- List the time ranges for permanent tooth eruption.
- Recognize the primary and permanent teeth in a mixed dentition.
- Define and recognize Angle's class I, class II, and class III relationships.
- List and describe types of tooth malocclusions.
- Define the key terms used in this module.

Mixed dentition	Open bite
Overbite	Edge-to-edge
Overjet	End-to-end
Angle's classification	Cross-bite
Buccal groove of the mandibular first molar	Facioversion
Molar relation	Linguoversion
Canine relation	Supraversion
Class I, II, and III	Rotated
- Provide information to a pediatric patient and his or her parent about the tooth eruption sequence.
- Provide information to a pediatric patient and his or her parent about the teeth present in (this patient's) mouth. Discuss the implications of notable findings.
- Provide information to the patient about occlusion, malocclusion, and any notable findings.
- Accurately communicate the findings to the clinical instructor. Discuss the implications of notable findings.
- Demonstrate knowledge of mixed dentitions by applying the information to the fictitious patient cases in this module.
- Given a patient case, establish the expected age of a person by studying the mixed dentition.
- Demonstrate knowledge of occlusion and malocclusion by applying the information to the fictitious patient cases in this module.

SECTION 1 SORTING OUT A MIXED DENTITION

The patient assessment includes examination of the dentition. As a child ages, the maxilla and mandible grow making room for the eruption of the permanent teeth. For a period of several years, a child will have a **mixed dentition**. That is, a combination of some primary teeth and some permanent teeth. Determining which teeth are primary and which are permanent in a mixed dentition can be challenging. This section presents a review of tooth eruption patterns. Guides to these stages can be found in the Ready References section of this module.

STAGES IN ERUPTION OF THE PRIMARY AND SECONDARY DENTITIONS

Age Five

The primary teeth usually erupt between 2½ to 5½ years of age; no permanent teeth are visible in the mouth.

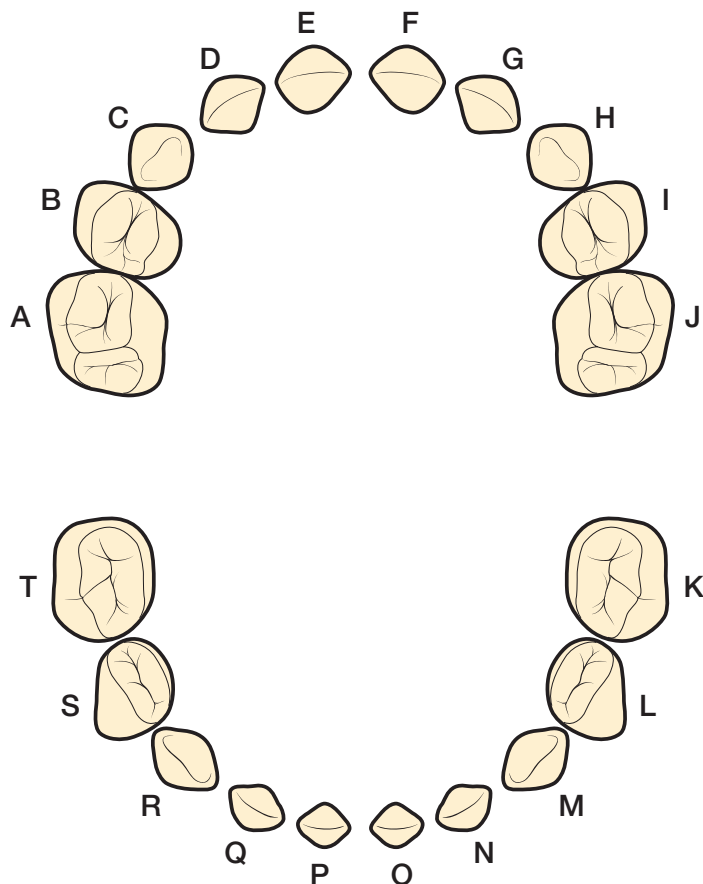


Figure 15-1. The primary dentition.

The incisors, canines, and molars present in the primary dentition of a 5-year-old child. Note that there are no primary premolars.

Age Six to Seven

As the maxilla and mandible grow, there is room for more teeth. From age 6 to 7, the permanent first molars erupt just distal to the second primary molars. No primary teeth are exfoliated to make room for these permanent molars. Eruption of the first molars is followed closely by the loss of the mandibular primary central incisors, which are quickly replaced by the permanent central incisors.

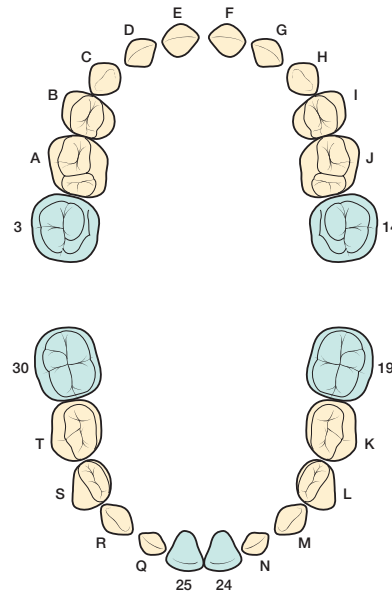


Figure 15-2. Mixed dentition, age 6 to 7.

Age Seven to Eight

By age 7 to 8, the permanent incisors have replaced the primary incisors.

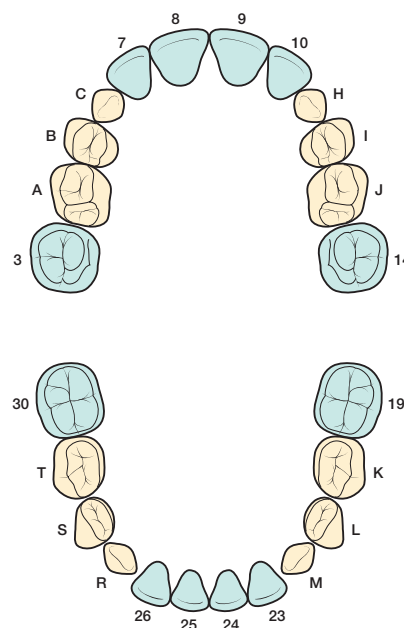


Figure 15-3. Mixed dentition, age 7 to 8.

Age Ten to Twelve

All four mandibular premolars erupt into place replacing the mandibular primary first molars and canines. On the maxillary arch, the permanent first premolars erupt and replace the primary first molars.

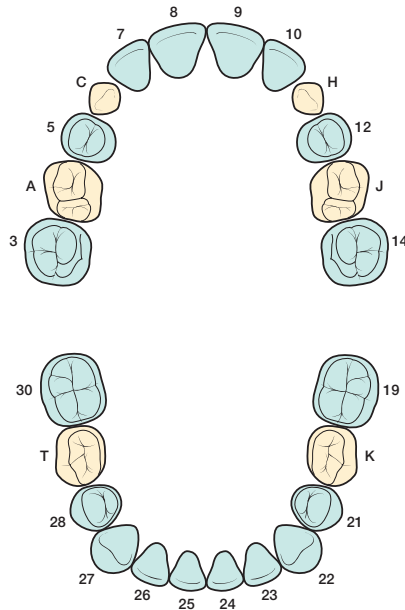


Figure 15-4. Mixed dentition, age 10 to 12.

Age Eleven to Thirteen

The primary canines and the primary second molars are the last to exfoliate. Normally, all primary teeth are exfoliated by age 13.

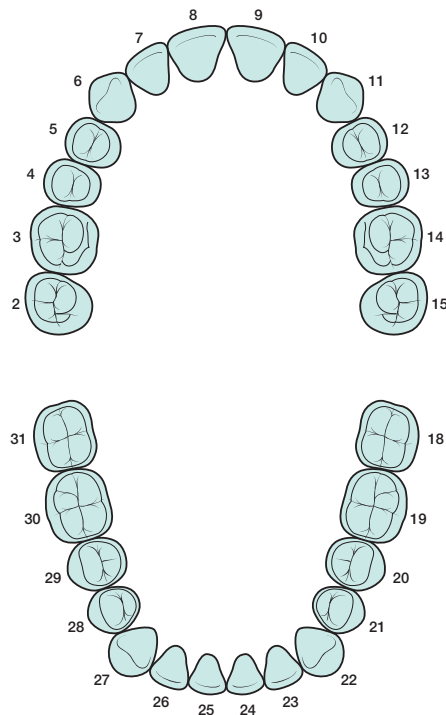


Figure 15-5. Permanent dentition, age 11 to 13.

SECTION 2 LEARNING TO LOOK AT THE OCCLUSION

THE RELATIONSHIP OF THE MAXILLARY AND MANDIBULAR TEETH

The patient assessment includes an examination of the **occlusion**, the relationship of the teeth to each other when the incisal and occlusal surfaces of the mandibular arch contact those of the maxillary arch. The way that the teeth occlude during chewing and speaking is important for the appearance, comfort, and health of an individual. The American Academy of Pediatric Dentistry defines **malocclusion** as the improper positioning of the teeth and jaws. Malocclusion is a variation of normal growth and development that can affect the bite, ability to maintain adequate plaque control, speech development, and appearance.



Figure 15-6. Vertical overlap—the maxillary incisors vertically overlap the mandibular incisors. The amount of vertical overlap is known as the **overbite**. (Courtesy of Dr. Don Rolfs, Periodontal

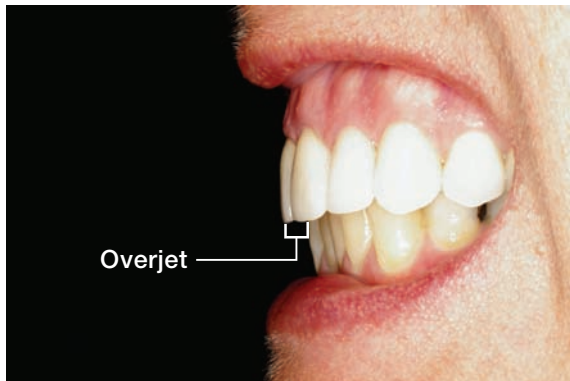


Figure 15-7. Horizontal distance—the maxillary incisors are labial to the mandibular incisors. The horizontal distance between the incisal edges of the maxillary teeth and the mandibular teeth is known as the **overjet**.



Figure 15-8. Relationship of teeth—the cusps of the maxillary teeth overlap the mandibular teeth. **The maxillary teeth are facial to the mandibular teeth.** (Courtesy of Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.)

ANGLE'S CLASSIFICATION

In 1887, Dr. Edward H. Angle developed a system for classifying the relationship of the mandibular teeth to the maxillary teeth.

- Angle's classification system is based primarily on the relationship of the mandibular first molar to the maxillary first molar.
- According to Angle, there are three relationships that can exist between the first molars: class I, class II, or class III.
- If the first molars are missing or malaligned the relationship of the mandibular canine to the maxillary canine is used in determining the classification.
- **The key to understanding Angle's classification is the position of the buccal groove of the mandibular permanent first molar in relation to the maxillary teeth** (Fig. 15-9).

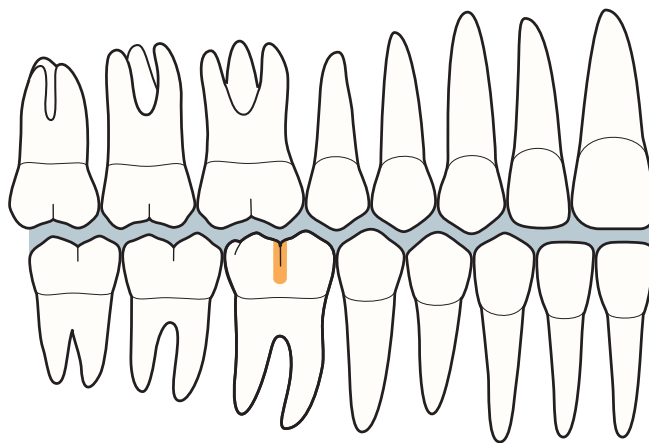


Figure 15-9. Angle's classification. The key to understanding Angle's classification is the buccal groove of the mandibular first molar. Many clinicians find it helpful to remember the phrase “**the mandibular groove moves**” when assessing occlusion.

Class I: Groove in Normal Position

- Molar relation: The buccal groove of the mandibular first molar is **directly in line** with the **mesiobuccal cusp of maxillary first molar**.
- Canine relation: The maxillary permanent canine occludes with the distal half of the mandibular canine and the mesial half of the mandibular permanent premolar.

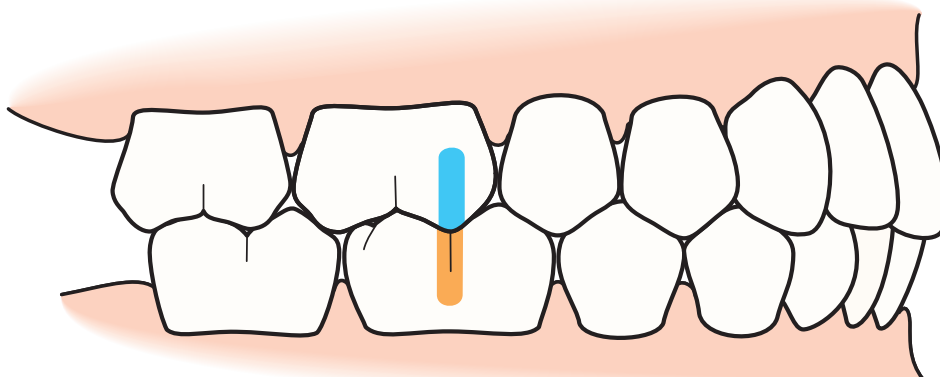


Figure 15-10. Angle's class I occlusion.

Class II, Division 1: Groove is Posterior to Normal Position

- Molar relation: The buccal groove of the mandibular first molar is **distal** to the **mesiobuccal cusp of maxillary first molar** by at least the width of a premolar.
- Canine relation: The distal surface of the mandibular canine is **distal** to the mesial surface of the maxillary canine by at least the width of a premolar.
- In class II, division 1 all four of the maxillary incisors protrude.

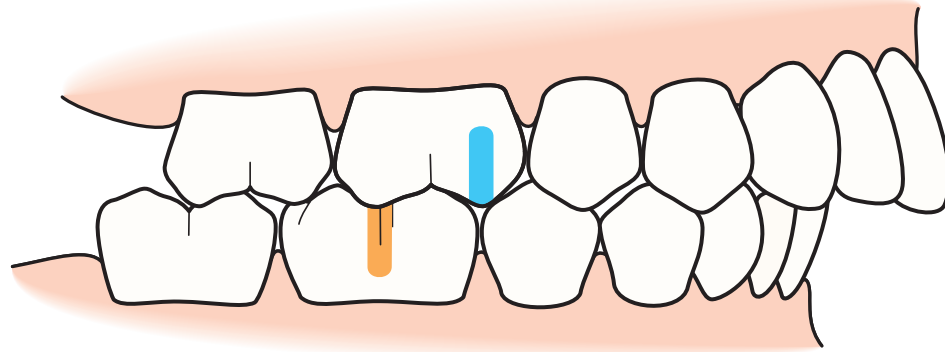


Figure 15-11. Angle's class II, division 1 occlusion.

Class II, Division 2: Groove is Posterior to Normal Position

- Molar relation: The buccal groove of the mandibular first molar is **distal** to the **mesiobuccal cusp of maxillary first molar** by at least the width of a premolar.
- Canine relation: The distal surface of the mandibular canine is **distal** to the mesial surface of the maxillary canine by at least the width of a premolar.
- In Class II, division 2, both maxillary lateral incisors protrude while both central incisors retrude.

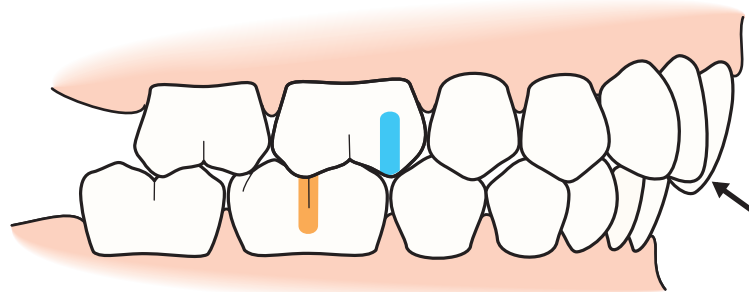


Figure 15-12. Angle's class II, division 2 occlusion.

Class III: Groove is Anterior to Normal Position

- Molar relation: The buccal groove of the mandibular first molar is **mesial to the mesiobuccal cusp of maxillary first molar** by at least the width of a premolar.
- Canine relation: The distal surface of the mandibular canine is **mesial to the mesial surface of the maxillary canine** by at least the width of a premolar.

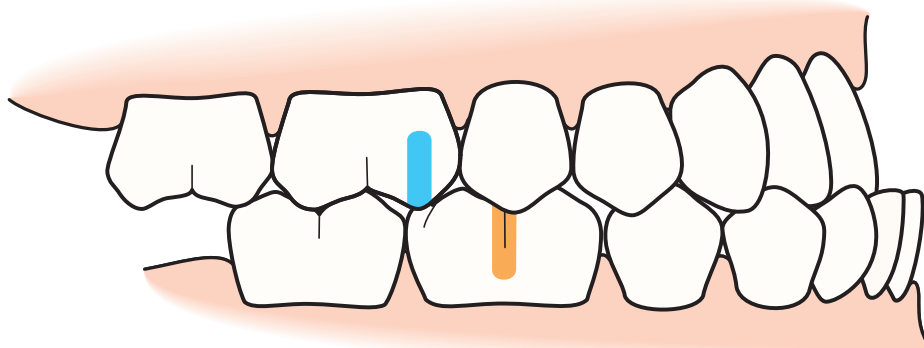


Figure 15-13. Angle's class III occlusion.

OTHER CHARACTERISTICS OF MALOCCLUSION

Figure 15-14. Open bite—the maxillary anterior teeth do not overlap or contact the mandibular anterior teeth. (Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.)



Figure 15-15. Anterior edge-to-edge bite—the incisal surfaces on the maxillary and mandibular teeth occlude (meet). On posterior teeth, an **end-to-end bite** occurs when the cusps of the maxillary teeth occlude with the cusps of the opposing mandibular teeth. (Courtesy of Dr. Richard Foster, Guilford Technical Community College.)





Figure 15-16. Deep overbite—the incisal edges of the maxillary anterior teeth are at a level of the cervical-third of the mandibular anterior teeth. (Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.)



Figure 15-17. Cross-bite—when one or more of the mandibular teeth are located facial to their maxillary counterparts. This photograph shows both an **anterior** and **posterior crossbite**. (Courtesy of Dr. Richard Foster, Guilford Technical Community College.)

MALPOSITIONS OF INDIVIDUAL TEETH

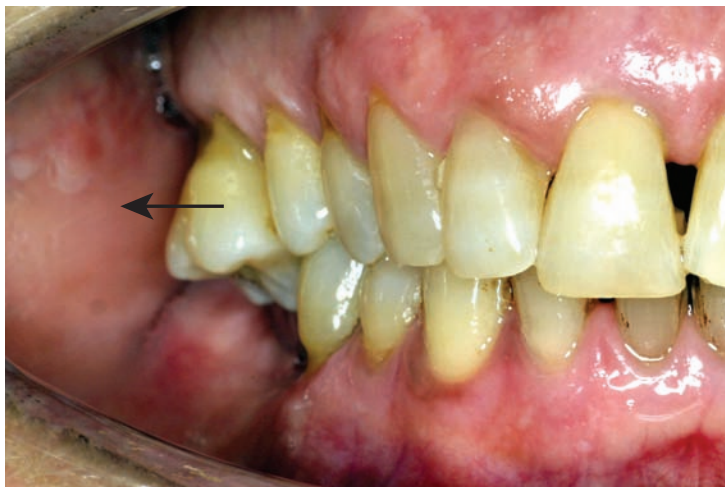


Figure 15-18. Facioversion—a tooth that is positioned facial to its normal position. In the photograph, the maxillary first molar is in facioversion. (Courtesy of Dr. Richard Foster, Guilford Technical Community College.)

Figure 15-19. Linguoversion—a tooth that is positioned lingual to its normal position. In this photograph the maxillary lateral incisors are in linguoversion. (Courtesy of Dr. Richard Foster, Guilford Technical Community College.)



Figure 15-20. Supraversion—a tooth that is positioned above the normal occlusal plane. In this photograph, the maxillary first molar is in supraversion. (Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.)

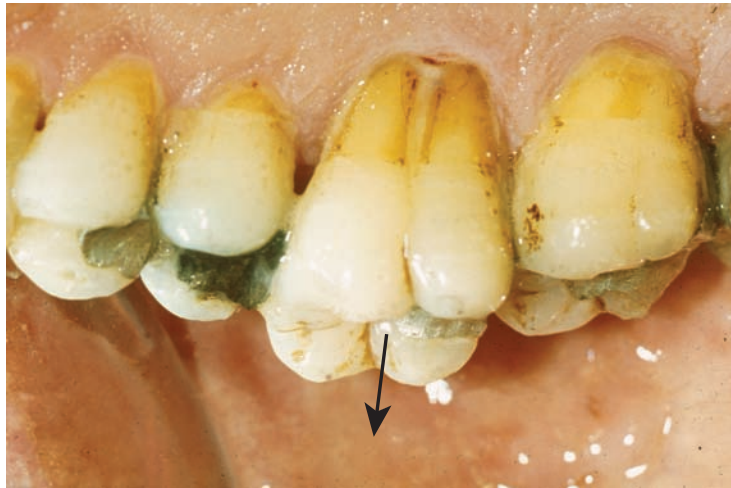


Figure 15-21. Rotated (torsiversion)—a tooth that is turned in relation to its normal position. In this photograph, the maxillary first premolar is rotated. (Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.)



SECTION 3 PEAK PROCEDURES

Procedure 15-1. Identifying Teeth in a Mixed Dentition

ACTION	RATIONALE
1. Resources. Use the Eruption Times and the Stages in Eruption references from Section 4 of this module.	• These references will assist you in recognizing primary and permanent teeth.
2. Identify the primary teeth. Circle the primary teeth present in red pencil on the Mixed Dentition Worksheet .	• Focusing your attention on identifying the primary teeth will help you to sort out the mixture of primary and permanent teeth.
3. Identify the permanent teeth. Circle the permanent teeth present in blue pencil on the Mixed Dentition Worksheet .	• Once you have identified the primary teeth, focus your attention on recognizing the permanent teeth present in the mouth.
4. Transfer the information from the Mixed Dentition Worksheet to the patient's chart or computerized record.	• Referring to the information entered on the Dentition Worksheet will facilitate the dental charting process.

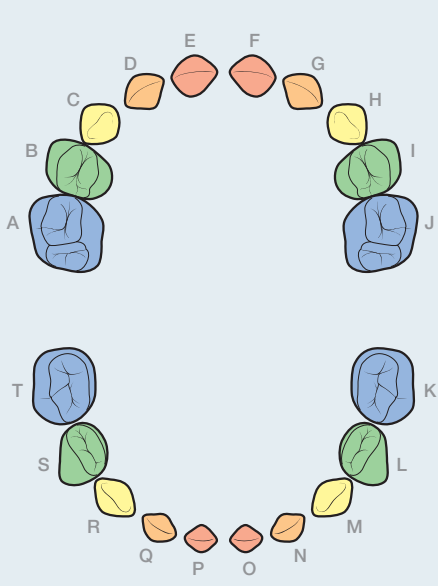
Procedure 15-2. Occlusion Classification and Characteristics

ACTION	RATIONALE
1. Resources. Use the Occlusion Classification: Molar Relationship reference from Section 5 of this module.	• This reference will assist you in assessing the molar relationship. • Note: if either the maxillary or mandibular molars are missing, the canines are used to classify the dentition.
2. Determine the molar relationship. Enter your findings on the Occlusion Worksheet from the Ready References section of this module.	• The items listed on the worksheet will help you remember to check for all characteristics of malocclusion and tooth malpositions.
3. Transfer the information from the Occlusion Worksheet to the patient's chart or computerized record.	• Referring to the information entered on the Occlusion Worksheet will facilitate the documentation process.

SECTION 4 READY REFERENCES: MIXED DENTITION

NOTE: The Ready References may be removed from the book by tearing along the perforated lines on each page. Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

Ready Reference 15-1. Eruption Times: Primary Teeth

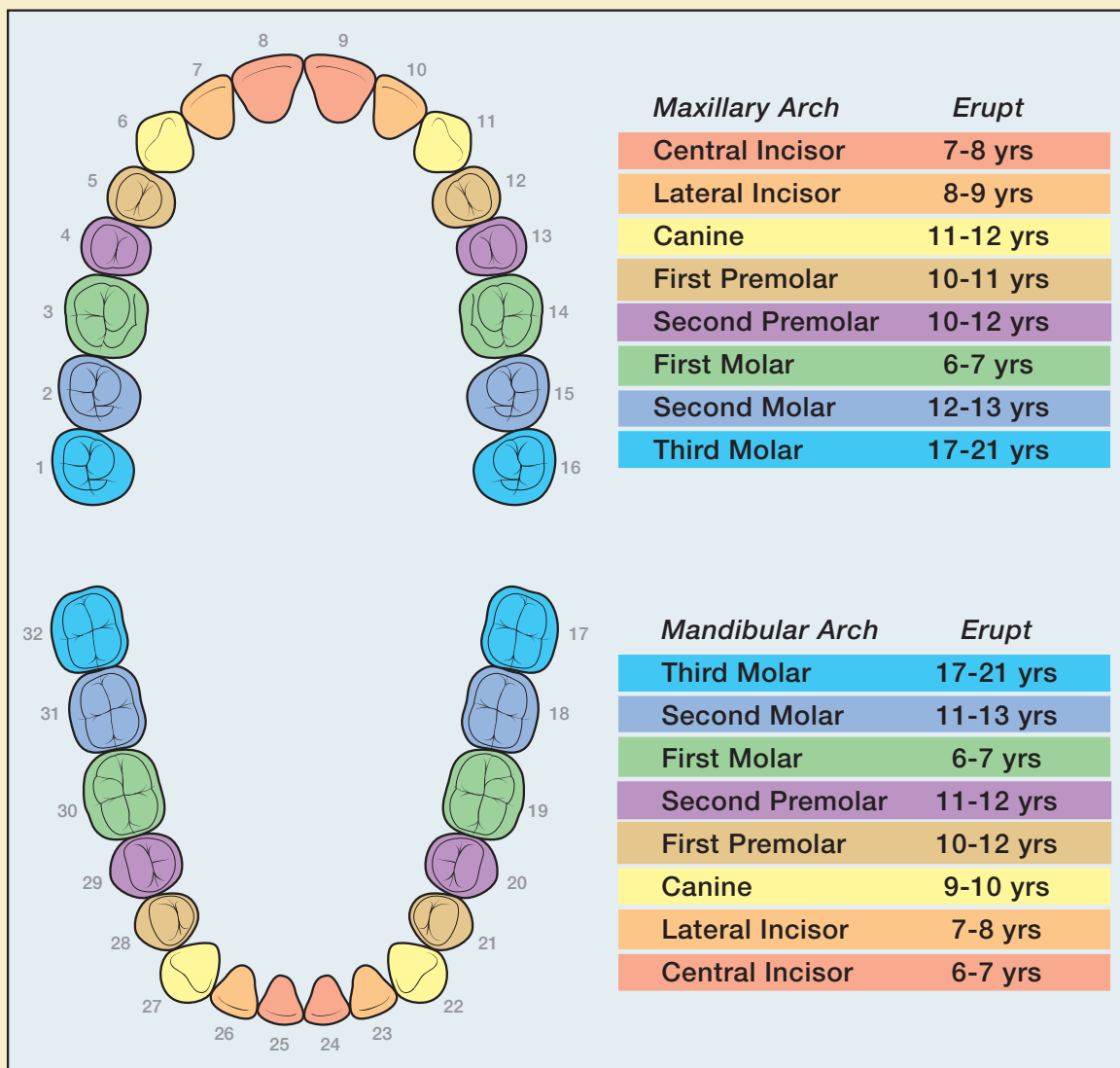


The diagram illustrates the eruption times for primary teeth in the maxillary and mandibular arches. The teeth are represented by colored circles with labels A through T. The maxillary arch (top) includes Central Incisor (A), Lateral Incisor (B), Canine (C), First Molar (D), and Second Molar (E). The mandibular arch (bottom) includes Second Molar (F), First Molar (G), Canine (H), Lateral Incisor (I), and Central Incisor (J). The eruption times are listed in the adjacent tables.

Maxillary Arch	Erupt	Shed
Central Incisor	8-12 mos	6-7 yrs
Lateral Incisor	9-13 mos	7-8 yrs
Canine	16-22 mos	10-12 yrs
First Molar	13-19 mos	9-11 yrs
Second Molar	25-33 mos	10-12 yrs

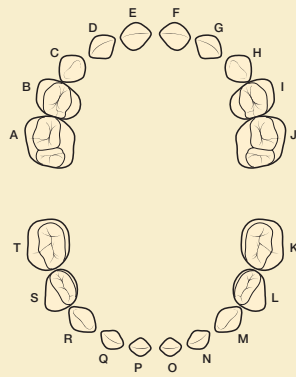
Mandibular Arch	Erupt	Shed
Second Molar	23-31 mos	10-12 yrs
First Molar	14-18 mos	9-11 yrs
Canine	17-23 mos	9-12 yrs
Lateral Incisor	10-16 mos	7-8 yrs
Central Incisor	6-10 mos	6-7 yrs

Ready Reference 15-2. Eruption Times: Permanent Teeth

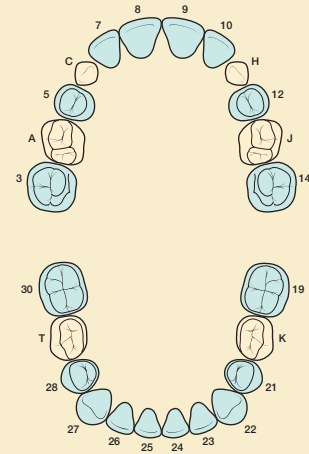


Ready Reference 15-3. Stages in Eruption

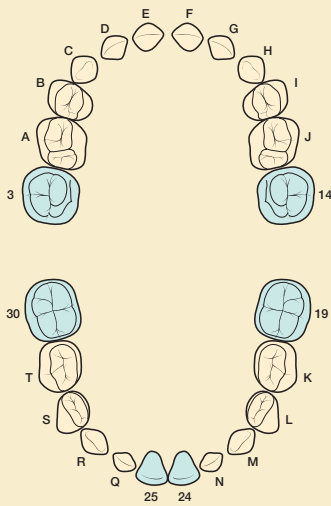
AGE 5



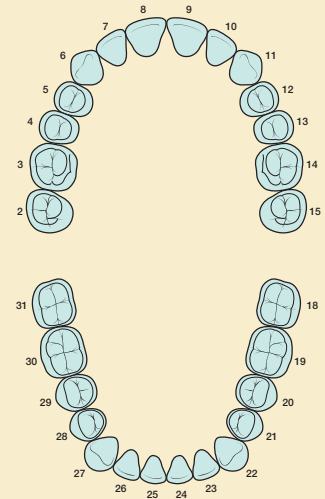
AGE 10-12



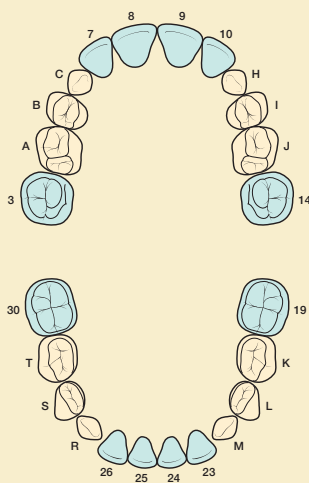
AGE 6-7



AGE 11-13



AGE 7-8

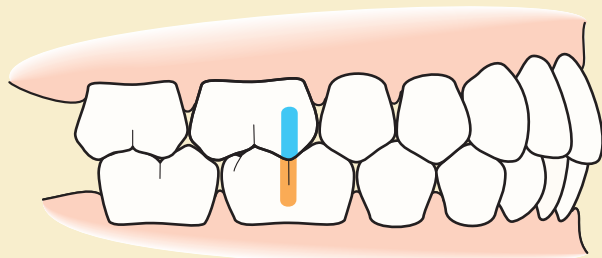


SECTION 5 READY REFERENCES: OCCLUSION

The Ready References may be removed from the book by tearing along the perforated lines on each page. Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

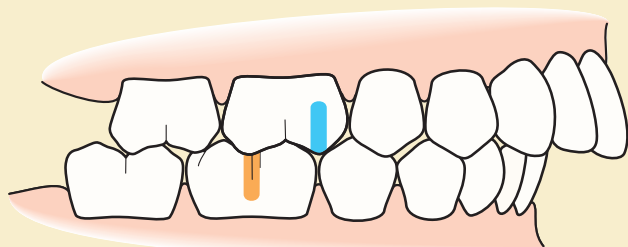
Ready Reference 15-4. Occlusion Classification: Molar Relationship

Class I



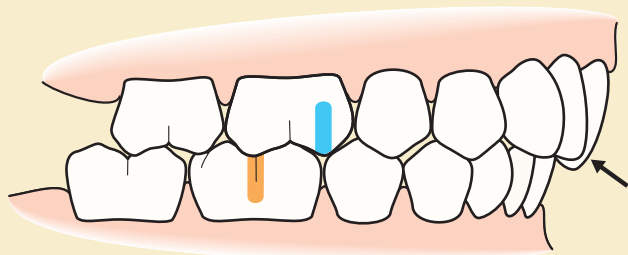
- The buccal groove of the mandibular first molar is **in line with** the mesiobuccal cusp of the maxillary first molar.

Class II Division I



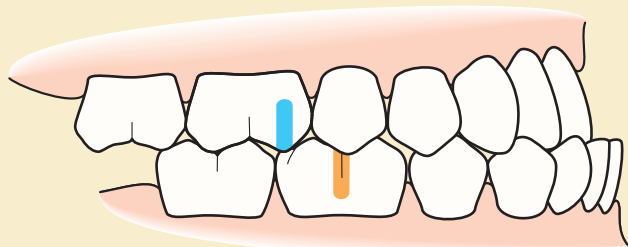
- The buccal groove of the mandibular first molar is **distal to** the mesiobuccal cusp of maxillary first molar by at least the width of a premolar.
- In Class II, division I all of the maxillary anterior incisors are protruded.

Class II Division 2



- The buccal groove of the mandibular first molar is **distal to** the mesiobuccal cusp of maxillary first molar by at least the width of a premolar.
- In Class II, division 2 both maxillary lateral incisors protrude while both central incisors retrude.

Class III



- The buccal groove of the mandibular first molar is **mesial to** the mesiobuccal cusp of maxillary first molar by at least the width of a premolar.

Ready Reference 15-5. Internet Resources: Mixed Dentition and Occlusion**MIXED DENTITION**

http://www.ada.org/public/topics/tooth_eruption.asp

Overview of tooth development and eruption on the website of the **American Dental Association**.

<http://www.umanitoba.ca/outreach/wisdomtooth/tooth.htm>

Information on eruption patterns on the **University of Manitoba** website.

http://cudental.creighton.edu/htm/Pediatric%20Dentistry/Growth%20and%20Development/Mixed%20Dentition/MIXED02_files/frame.htm

Information on mixed dentition, occlusion, and analysis on the **Creighton University School of Dentistry, Department of Pediatric Dentistry and Orthodontics'** website.

http://www.uic.edu/classes/orla/orla312/dissected_skull_series.htm

This **University of Illinois at Chicago** website has excellent images of dissected skulls showing dentitions at ages 2, 5, and 8.

<http://www.simplyteeth.com/category/sections/Adult/ToothGrowthEruption/EruptionTeeth.asp?category5index§ion5T&img5adult&page513>

The **Simply Teeth** website has information on the eruption of the permanent teeth.

OCCLUSION

<http://health.allrefer.com/health/malocclusion-of-teeth-info.html>

Definitions and images related to the topic of occlusion are found on the **Health All Refer** website.

<http://www.merck.com/mrkshared/mmanual/section9/chapter106/106d.jsp>

Information on malocclusion on the **Merck Manual of Diagnosis and Therapy** website.

<http://www.aapd.org/publications/brochures/maloccl.asp>

Information on malocclusion on the **American Academy of Pediatric Dentistry** website.

<http://www.chclibrary.org/micromed/00055950.html>

Definition, description, and causes and symptoms of malocclusion on the **Dr. Joseph F. Smith Medical Library** website.

http://www.healthsystem.virginia.edu/uvahealth/peds_dental/malocclu.cfm

University of Virginia Health System's website has information on malocclusion.

http://www.dental.net.nz/base_article.php?articleID510

Information on malocclusion on the website of the **Centre for Dental Excellence**.

SECTION 6 THE HUMAN ELEMENT

Box 15-1. Through the Eyes of a Student

I had gotten pretty confident about charting a patient's teeth. I had seen several adult patients and one 16-year-old. But then it happened. Sitting in my chair was my first patient with a mixed dentition. My palms began to sweat. As I looked in the mouth, I could not tell which teeth were permanent and which were primary. I really started to panic.

Then, I got out an eruption chart that I had laminated for clinic. I studied the chart to see which teeth were likely to be present in a child's mouth at age 11. I calmed down and thought about which primary teeth were likely to be present and which permanent teeth probably would have erupted by age 11.

I looked in the patient's mouth again and began marking the primary teeth that were present. Next I crossed out the permanent teeth that were not present in the mouth. Before I knew it, I had prepared a chart of teeth present in my patient's mouth.

When my instructor reviewed my charting, she smiled and said, "Bravo, Skip!" I felt really proud of myself, but most importantly, I learned that I could handle new things when I just stay calm and stop to remember all the pieces of information in the puzzle (like primary dentition, adult dentition, and eruption patterns).

Skip, student
South Florida Community College

TABLE 15-1. English to Spanish Phrase List for Mixed Dentition and Occlusion

This chart shows the age ranges when the baby teeth (primary teeth) erupt into the mouth.	Este grafico indica la edad cuando los dientes de bebe (dientes principales) erupcan en la boca.
This chart shows the age ranges when the permanent teeth erupt into the mouth.	Este grafico indica la edad cuando los dientes permanentes erupcan en la boca.
All of your baby teeth are in your mouth.	Todos los dientes de bebe estan en su boca.
This is a permanent tooth.	Este es us diente permanente.
This is a baby tooth.	Este es un diente de bebe.
The baby teeth are needed to retain the space in the mouth for the eruption of the permanent teeth.	Los dientes de bebe son necesarios para retener el espacio en las boca para los dientes permanentes.
Your (your child's) teeth have an ideal bite.	Sus dientes (los dientes de su niño) tienen un mordisco ideal.
Your (your child's) bite is not ideal. This bite could cause some dental problems in the future.	Sus dientes (los dientes de su niño) no tienen un mordisco ideal. Esto puede provocar algunos problemas dentales en el futuro.
This tooth is out of alignment (position) with the other teeth in your mouth.	Este diente esta fuera de alineamiento (posicion) con los otros dientes en su boca.
The position of this tooth (these teeth) could cause dental problems in the future.	La posicion de este diente (estos dientes) puede provocar problemas dentales en el futuro.
I would recommend seeing an orthodontist (dental specialist) about your (your child's) bite.	Yo le recomendo que consulte con un dentista especializando en orofacial sobre su (sobre sus niño's) mordisco.
I am going to get my clinic instructor.	Voy ha buscar a mi instructor.

SECTION 7 PRACTICAL FOCUS—MIXED DENTITION

DIRECTIONS:

- Use the steps outlined in [Procedure 15-1](#) and the [Mixed Dentition Worksheet](#) to determine the primary and permanent teeth present for the three fictitious patient cases in this section. Bethany Biddle is a fictitious patient whom you are familiar with from other modules in the book. The other two fictitious patients are unique to this module.
- Determine the expected age of each patient by studying his/her mixed dentition.
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.

Sources of Clinical Photographs

The author gratefully acknowledges the sources of the following clinical photographs in the Practical Focus sections of this module.

- Figure 15-26. Dr. Marci Marano Beck, Tallahassee, FL.
- Figure 15-27. Dr. Marci Marano Beck, Tallahassee, FL.
- Figure 15-29. Dr. Marci Marano Beck, Tallahassee, FL.
- Figure 15-30. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-32. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 15-34. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-35. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-36. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-37. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-38. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 15-39. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 15-40. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 15-41. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-42. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-43. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 15-44. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-45. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-46. Dr. Richard Foster, Guilford Technical Community College.
- Figure 15-47. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.

FICTITIOUS PATIENT CASE B: Bethany Biddle

Figure 15-26. Anterior view of Bethany's dentition.

Directions for Case B:

- View the three photographs of Bethany's mouth on this and the following pages.
- Remove the [Mixed Dentition Worksheet](#) that follows the three photos of Bethany's mouth and indicate the primary and permanent teeth present.
- Indicate Bethany's expected age based the primary and permanent teeth present in her mouth at this time: _____

Bethany Biddle (continued)

Figure 15-27. Bethany's dentition: maxillary arch.



Figure 15-28. Bethany's dentition: mandibular arch.

Mixed Dentition Worksheet

Case: _____

Directions: Use a red/blue pencil to indicate the following:

- Circle the primary teeth present in the mouth on the drawing of the primary dentition
- Circle the permanent teeth present in the mouth on the drawing of the primary dentition

PRIMARY DENTITION	PERMANENT DENTITION
Maxillary Mandibular	Maxillary Mandibular

Figure 15-29. Mixed Dentition Worksheet for Bethany Biddle.

FICTITIOUS PATIENT CASE L: Lulu Lowe

Patient Case L is a pediatric patient with fixed orthodontic appliances and a mixed dentition.



Figure 15-30. Lulu's dentition on the maxillary arch.

Directions for Case L:

- View the photograph above of Lulu's mouth.
- Remove the [Mixed Dentition Worksheet](#) that follows and indicate the primary and permanent teeth present in Lulu's mouth.
- Indicate Lulu's expected age based the primary and permanent teeth present in her mouth at this time: _____

Mixed Dentition Worksheet

Case: _____

Directions: Use a red/blue pencil to indicate the following:

- Circle the primary teeth present in the mouth on the drawing of the primary dentition
- Circle the permanent teeth present in the mouth on the drawing of the primary dentition

PRIMARY DENTITION	PERMANENT DENTITION
Maxillary Mandibular	Maxillary Mandibular

Figure 15-31. Mixed Dentition Worksheet for Lulu Lowe.

FICTITIOUS PATIENT CASE K: Kenneth Kole

Figure 15-32. Kenneth Kole's dentition.

Directions for Case K:

- View the photograph above of Kenneth's mouth.
- Remove the [Mixed Dentition Worksheet](#) that follows and indicate the primary and permanent teeth present in Kenneth's mouth.
- Indicate Kenneth's expected age based the primary and permanent teeth present in his mouth at this time: _____

Mixed Dentition Worksheet

Case: _____

Directions: Use a red/blue pencil to indicate the following:

- Circle the primary teeth present in the mouth on the drawing of the primary dentition
- Circle the permanent teeth present in the mouth on the drawing of the primary dentition

PRIMARY DENTITION	PERMANENT DENTITION
Maxillary Mandibular	Mandibular

Figure 15-33. Mixed Dentition Worksheet for Kenneth Kole.

SECTION 8 PRACTICAL FOCUS—OCCLUSION

DIRECTIONS:

- Use the steps outlined in [Procedure 15-2](#) for each of the fictitious patient cases. These fictitious patients are unique to this module.
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.



Figure 15-34.



Figure 15-35.



Figure 15-36.



Figure 15-37.



Figure 15-38.



Figure 15-39.



Figure 15-40.



Figure 15-41.



Figure 15-42.



Figure 15-43.



Figure 15-44.



Figure 15-45.



Figure 15-46.



Figure 15-47.

SECTION 9 QUICK QUESTIONS

1. A mixed dentition is one in which:
 - A. Only primary teeth are present.
 - B. Only permanent teeth are present.
 - C. Both primary and permanent teeth are present.
 - D. The third molars have not erupted.
2. All primary teeth have erupted into the mouth by age:
 - A. 5½
 - B. 7
 - C. 10
 - D. 13
3. Normally all primary teeth are exfoliated by age:
 - A. 5½
 - B. 7
 - C. 10
 - D. 13
4. The relationship of the teeth to each other when the incisal and occlusal surfaces of the mandibular arch contact those of the maxillary arch is known as the:
 - A. Prognathic relationship
 - B. Retrognathic relationship
 - C. Occlusion
 - D. Malocclusion
5. In a normal occlusion, the maxillary incisors vertically overlap the mandibular incisors. This vertical overlap is known as the overjet.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.
6. In a normal occlusion, the maxillary incisors are lingual to the mandibular incisors. The horizontal distance between the incisal edges of the maxillary and mandibular teeth is known as the overbite.
 - A. Both statements are TRUE.
 - B. Both statements are FALSE.
 - C. The first statement is TRUE, the second statement is FALSE.
 - D. The first statement is FALSE, the second statement is TRUE.

7. According to Angle's classification, when the buccal groove of the mandibular first molar is distal to the mesiobuccal cusp of the maxillary first molar by at least the width of a premolar and the maxillary central incisors retrude, the occlusion is classified as:
- A. Class I
 - B. Class II, division 1
 - C. Class II, division 2
 - D. Class III
8. According to Angle's classification, when the buccal groove of the mandibular first molar is directly in line with the mesiobuccal cusp of the maxillary first molar the occlusion is classified as:
- A. Class I
 - B. Class II, division 1
 - C. Class II, division 2
 - D. Class III
9. According to Angle's classification, when the buccal groove of the mandibular first molar is mesial to the mesiobuccal cusp of the maxillary first molar by at least the width of a premolar, the occlusion is classified as:
- A. Class I
 - B. Class II, division 1
 - C. Class II, division 2
 - D. Class III
10. According to Angle's classification, when the buccal groove of the mandibular first molar is distal to the mesiobuccal cusp of the maxillary first molar by at least the width of a premolar and the maxillary incisors protrude, the occlusion is classified as:
- A. Class I
 - B. Class II, division 1
 - C. Class II, division 2
 - D. Class III

SECTION 10 SKILL CHECK

TECHNIQUE SKILL CHECKLIST

MIXED DENTITION

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Accurately identifies the primary teeth present in the dentition on the Mixed Dentition Worksheet.		
Accurately identifies the permanent teeth present in the dentition on the Mixed Dentition Worksheet.		
Accurately transfers the information to the patient chart or computerized record.		
Sum of " S "s _____ divided by Total Points Possible (3) equals the Percentage Grade _____		

TECHNIQUE SKILL CHECKLIST OCCLUSION

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).DIRECTIONS FOR EVALUATOR: Use **Column E**.Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Accurately classifies the occlusion on the Occlusion Worksheet.		
Accurately notes other characteristics of malocclusion or malpositions of individual teeth on the Occlusion Worksheet.		
Accurately transfers the information to the patient chart or computerized record.		
Sum of "S"s _____ divided by Total Points Possible (3) equals the Percentage Grade _____		

COMMUNICATION SKILL CHECKLIST MIXED DENTITION

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of a fictitious patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains the eruption sequence of permanent teeth to the patient and/or parent.		
Relates the eruption sequence to the teeth present in the patient's mouth.		
Encourages patient questions.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level, avoiding dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (6) equals the Percentage Grade _____		

COMMUNICATION SKILL CHECKLIST

OCCLUSION

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of a fictitious patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play.

Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains the role of occlusion in the health and appearance of the dentition.		
Explains findings such as malocclusion or malpositions of individual teeth to the patient.		
Encourages patient questions.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level, avoiding dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (6) equals the Percentage Grade _____		

NOTES

Module 16

Dental Radiographs

MODULE OVERVIEW

Radiographic examination of patients provides valuable information related to the presence or absence of dentally related disease. However, radiographs should never be used as the sole source for diagnosis. It is only when the information derived from the radiographic assessment is combined with a careful review of the health history and periodontal charting of soft tissue findings that our radiographic information becomes a powerful diagnostic aid.

This module covers the evaluation and assessment of radiographic information involving the recognition of normal anatomic structures, evaluation of the teeth and their supporting structures. It will require recognition and discernment of differences between normal and abnormal conditions, especially those relating to the assessment of the alveolar bone and periodontal structures.

If necessary, the normal radiographic anatomy and the radiographic manifestations of common dental diseases can be reviewed by referring to a dental radiology theory textbook before beginning this module.

MODULE OUTLINE

SECTION 1	Review of Radiographic Anatomy	596
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	Radiographic Features of Normal Alveolar Bone	
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	Radiographic Evaluation Worksheet	
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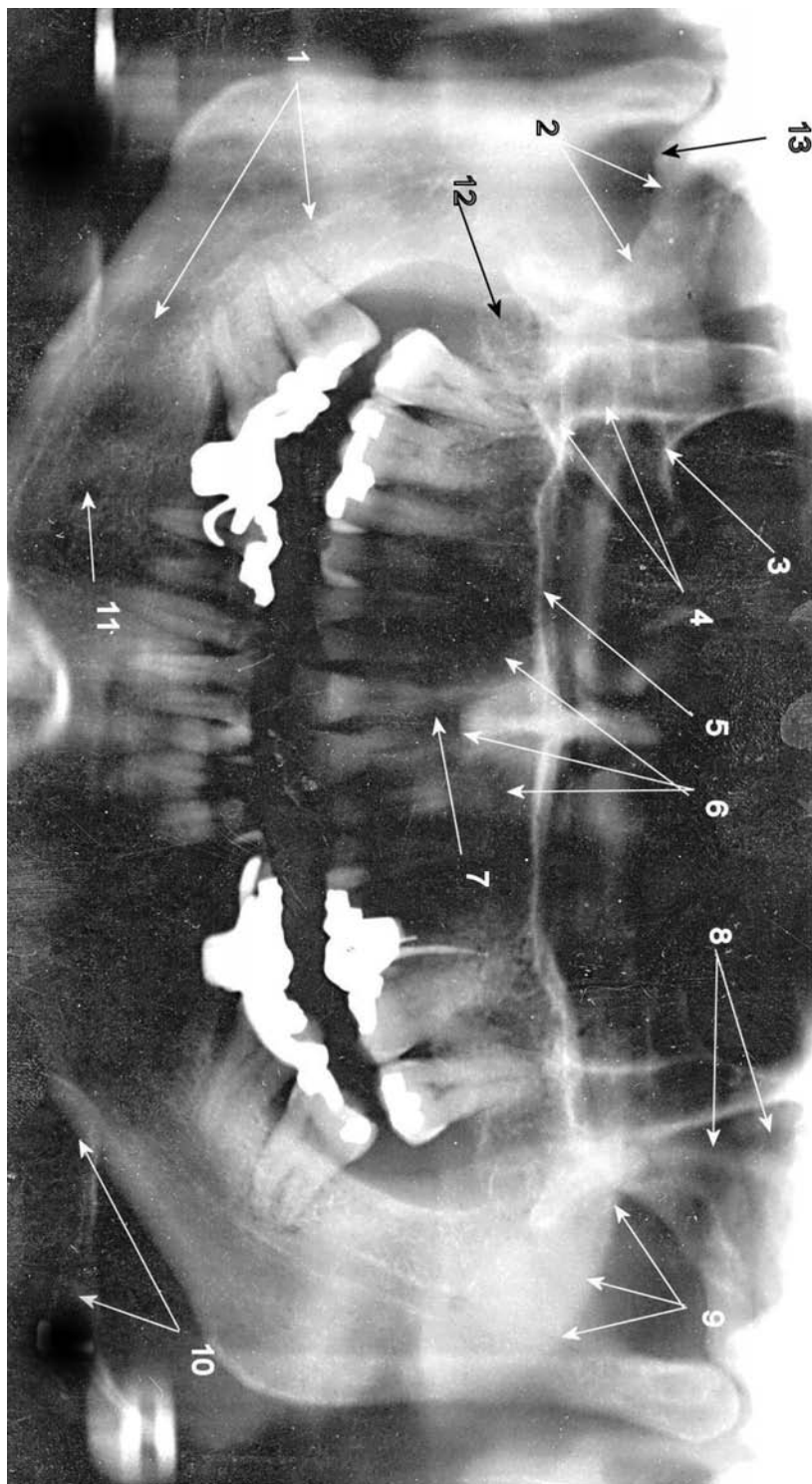
SECTION 6	The Human Element	611
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SKILL GOALS

- Identify the anatomic structures commonly visible on a panoramic radiograph.
- Recognize radiographic technique and processing errors that could effect radiographic assessment.
- Given a set of radiographs, recognize and localize the location of each radiographically visible normal anatomic landmark.
- Recognize the radiographic characteristics of normal and abnormal alveolar bone.
- Recognize and describe early radiographic evidence of periodontal disease.
- Classify the degree of alveolar bone loss as: “localized” or “generalized,” “slight,” “moderate,” “severe/advanced.”
- Distinguish between vertical and horizontal alveolar bone loss.
- Recognize potential etiologic agents for periodontal disease radiographically.
- Briefly and succinctly summarize your radiographic findings and relate them to pertinent elements from the health history, clinical charting, periodontal probing, etc.
- Gain practical experience in radiographic assessment by applying information from this module to the fictitious patient cases in this module.

SECTION 1 REVIEW OF RADIOGRAPHIC ANATOMY

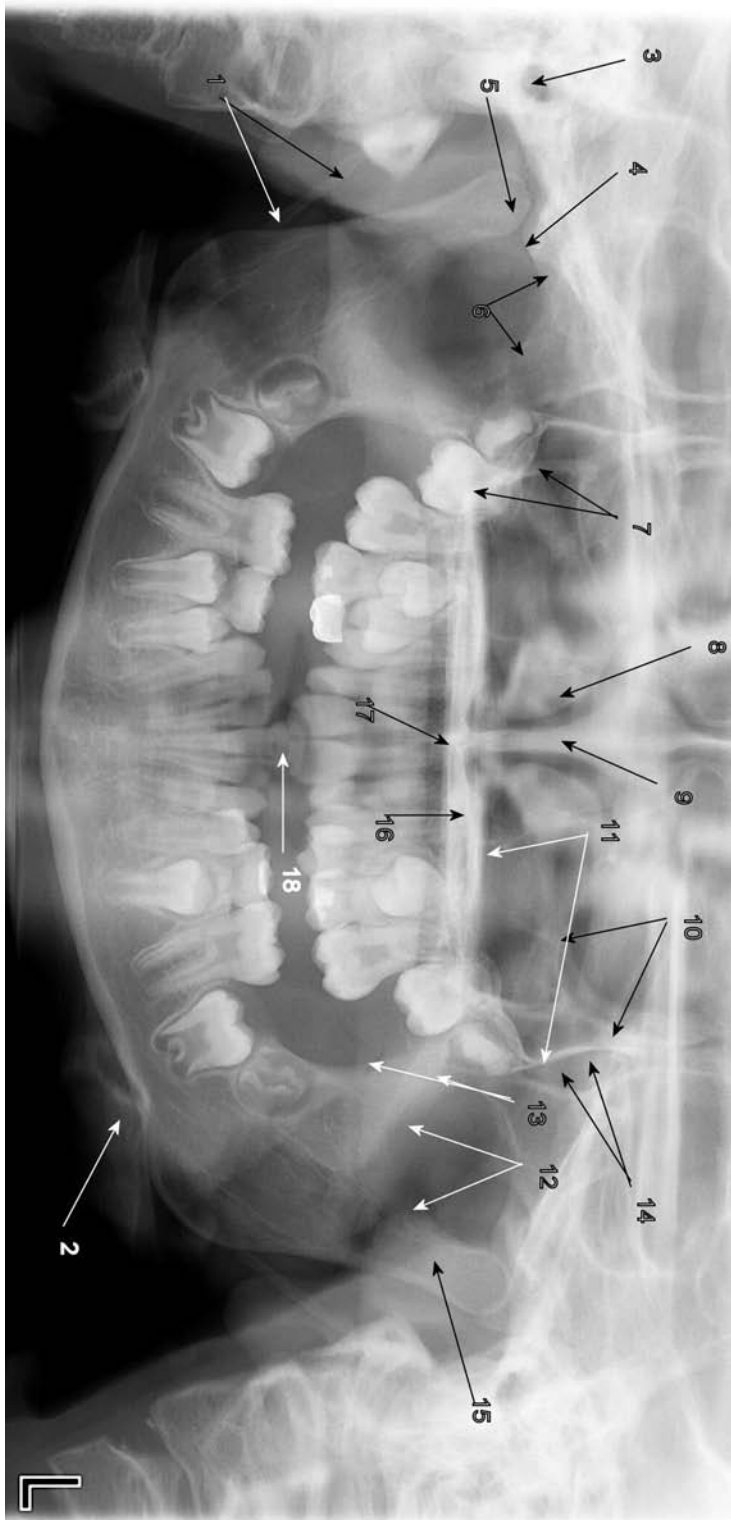
Before attempting to interpret a set of radiographs, it is important to have an understanding of the anatomic structures visible on radiographs. This section presents a quick review of the anatomic structures readily and commonly visible on a panoramic radiograph (Figs. 16-1 and 16-2).



Answers:

- 1—mandibular canal
- 2—lower border of the zygomatic arch
- 3—lower border of the orbit
- 4—zygomatic process of the maxilla—also known as the “malar process”
- 5—hard palate
- 6—shadow of the nose
- 7—incisive foramen
- 8—pterygomaxillary fissure
- 9—shadow of the soft palate
- 10—hyoid bone (may be seen bilaterally)
- 11—mental foramen
- 12—tuberosity of the maxilla
- 13—articular eminence

Figure 16-1. Panoramic Radiograph of An Adult Patient.

**Answers:**

- 1—stylohyoid ligament
- 2—hyoid bone
- 3—external auditory meatus
- 4—articular eminence
- 5—head of the mandibular condyle
- 6—lower border of the zygomatic arch
- 7—zygomatic process of the maxilla/malar process
- 8—inferior concha and turbinate
- 9—nasal septum
- 10—inferior orbital rim
- 11—maxillary sinus
- 12—mandibular notch
- 13—coronoid process of the mandible
- 14—pterygo-maxillary fissure
- 15—neck of the mandibular condyle
- 16—hard palate
- 17—anterior nasal spine
- 18—bite guide of the panoramic unit

Figure 16-2. Panoramic Radiograph of a Pedodontic Patient.

SECTION 2 INTERPRETING RADIOGRAPHS

WHAT TO LOOK FOR AND HOW TO LOOK FOR IT

When evaluating any radiograph, whether a single periapical, bitewing, or a complete mouth radiographic survey (CMRS)/full mouth x-ray (FMX) perform the radiographic evaluation in a consistent, routine fashion from one time to the next. **When working with digital radiographs, remember that the information present and the interpretation process are the same as those for a conventional radiograph.** The order in which the evaluation is performed is not necessarily as critical as the consistency with which the clinician performs the task.

Four-Step Assessment

For convenience, the radiographic interpretative process can be divided into a series of steps.

- **Step 1: Determine diagnostic value.** Ask the question: “Do these radiographs exhibit the criteria for meeting minimal diagnostic acceptability?” Refer to the Ready References Section of this module for a brief definition of diagnostic acceptability.
- **Step 2: Recognize any significant technique or processing errors that will deter a clinician’s ability to correctly evaluate all of the relevant dental structures.**
- **Step 3: Recognize the “normal” anatomic structures observable on the radiographs.** It is important to be able to distinguish normal structures from variations or deviations from normal. For example, the clinician should recognize the mental foramen as “normal anatomy” rather than “periapical pathology,” especially if the foramen is anatomically close to the apex of the mandibular first or second premolar.
- **Step 4: Conduct a systematic and careful assessment of the teeth and their supporting tissues.** The clinician must be careful not to focus on only a single condition or deviation. For example, a dental hygienist will be naturally inclined to look at the alveolar bone first. Focusing on the alveolar bone early in the search process may distract the hygienist and cause him or her to stop searching for other dentally relevant deviations and variations from normal such as calcified pulps, dens-in-dente, or periapical pathosis, etc. To avoid this tendency to focus on the alveolar bone, he or she should look at the bone last.

Regardless of his or her role in the dental team, the clinician should consistently examine radiographs for: dental caries, periapical pathology, calcified pulps (indicators of possible prior trauma, asymmetry in pulps of similar teeth (an early loss of pulp vitality will produce a pulp that doesn’t mature with age by getting smaller), changes in alveolar bone pattern from one area to another, alveolar bone height, and etiologic agents promoting dental disease, such as overhanging margins on restorations and crowns, calculus, or open contacts.

RADIOGRAPHIC FEATURES OF NORMAL ALVEOLAR BONE

Normal alveolar bone height will vary slightly depending on the age of the patient. In general, “normal alveolar bone height” is 1.5–2 mm below and parallel to the cemento-enamel junction (CEJ) of adjacent teeth (Fig. 16-3).

- The bone forming the alveolar crest should be smooth and intact with the radiolucent space adjacent to the root surface no wider than the width of the periodontal ligament space.

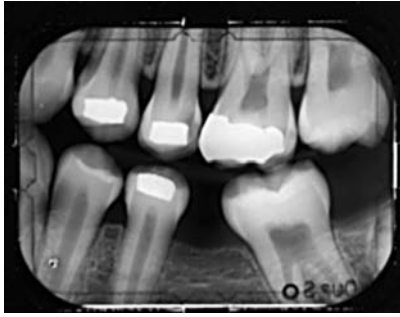


Figure 16-3. Normal Alveolar Bone Height. This radiograph shows a normal alveolar bone height that is 1.5 to 2 mm below and parallel to the cemento-enamel junction. In this example, alveolar crest is a dense radiopaque line similar in density to the lamina dura surrounding the root of the tooth.

- Many times, as in Figure 16-3, a distinct “crestal lamina dura” will be visible, in other words, the alveolar crest appears as a dense radiopaque line similar in density to the lamina dura surrounding the root of the tooth. The most important radiographic feature of the alveolar crest, however, is that it forms a smooth intact surface between adjacent teeth with only the width of the PDL separating it from the adjacent tooth surface.

NOTE: The most important radiographic feature of the alveolar crest is that it forms a smooth intact surface between adjacent teeth, with only the width of the PDL separating it from the adjacent root surface.

Recognizing Early Evidence of Alveolar Bone Loss

Early evidence of interproximal alveolar bone loss begins as a progressively increasing area of radiolucency where the alveolar crest and PDL meet.

1. **Widening of Periodontal Ligament Space.** Look for the earliest evidence of bone loss as a progressive widening of the periodontal ligament space (PDLS) as it approaches the alveolar crest (Fig. 16-4). This increasing area of radiolucency produces a triangular shape and is referred to as triangulation.
 - Triangulation is the widening of the periodontal ligament space (PDLS) caused by the resorption of bone along either the mesial or distal aspect of the interdental (interseptal) crestal bone (Fig. 16-4).
 - Depending on the patient’s oral hygiene, this increased widening of the PDLS may be seen on the mesial or distal of a single tooth or on multiple teeth.
2. **Loss of Integrity of Crestal Lamina Dura.** An additional early radiographic sign of alveolar bone loss is a loss of the integrity of the crestal lamina dura between adjacent teeth.

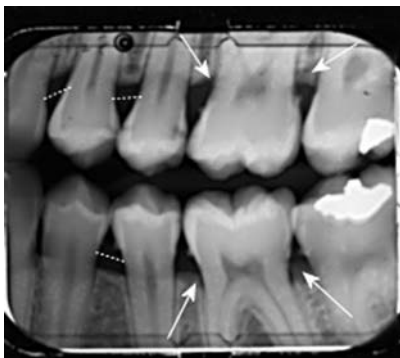


Figure 16-4. Early Evidence of Alveolar Bone Loss. The crestal bone on this radiograph demonstrates triangulation, a pointed, triangular appearance that indicates a widening of the periodontal ligament space due to bone loss.

SECTION 3 PEAK PROCEDURE

Procedure 16-1. Assessing Radiographs

ACTION	RATIONALE
1. Determine which radiographs are diagnostically acceptable. Ask the question “Do these radiographs exhibit the criteria for meeting minimal diagnostic acceptability?”	• A CRMS/FMX should exhibit sufficient radiographic information to provide the dentist with an adequate amount of information to determine the patient’s specific treatment needs. • Usually, this means that the CRMS/FMX should show each interproximal space at least once without overlap and each root apex at least once.
2. Look for technique or processing errors. Ask the questions: • “Are there any significant technique or processing errors that will influence my ability to correctly evaluate all of the relevant dental structures?” • “What would I do to correct these errors next time?”	• Any significant technique and/or processing errors will negatively impact the clinician’s ability to evaluate all of the relevant dental structures.
3. Recognize normal structures.	• It is important to distinguish normal anatomic structures from variations or deviations from normal.
4. Conduct a systemic assessment of the teeth and their supporting tissues.	• Conducting the assessment in a consistent and thorough manner will assure that all aspects of the CMRS/FMX are evaluated. • A systematic assessment should include identification of: • Teeth present/absent in the dentition • Dental caries • Periapical pathology or calcified pulps • Asymmetry in pulps of similar teeth • Changes in alveolar bone pattern from one area to another • Alveolar bone height • Etiologic agents promoting dental disease such as overhanging margins on restorations and crowns, calculus deposits, open contacts
5. Place radiographs in the patient chart or computerized record for use at all appointments.	• At the start of each appointment, place the radiographs on a chairside view box or display them on a computer screen. • Radiographs provide useful information during treatment and patient education.

SECTION 4 CONE BEAM COMPUTED TOMOGRAPHY

One amazing new dental radiographic technology is called **Cone Beam Computed Tomography (CBCT)** or **Cone Beam Volume Tomography (CBVT)**. These very sophisticated imaging systems ultimately may completely replace the need for intraoral, panoramic, or other extraoral radiographic imaging techniques. With this technology, or advances in this current technology, individuals reading this paragraph will witness a time in the not too distant future when all that will be necessary to diagnostically image a patient will be to have him/her sit in a chair; stabilize his/her head in some minimal way, and activate the unit similar to exposing a panoramic radiograph today. Image capture will take less than 20 seconds and show up on our computer screen within 2 to 4 minutes. The software will automatically create a three-dimensional view of the patient from any desired angle. The details of the images will surpass any of our current extraoral imaging systems and be approximately equivalent to or better than our intraoral radiographs.

Space does not permit a detailed explanation of CBCT principles, but in its simplest form, the cone beam CT unit produces an adjustable beam of radiation and exposes an area of the patient's head as small as $4\text{ cm} \times 4\text{ cm}$ up to $15\text{ cm} \times 15\text{ cm}$ (essentially the whole head). In less than 20 seconds, the unit uses a pulsed radiation exposure to expose the patient's head in a 360-degree circle. During its rotation around the patient's head, the unit will expose more than 500 individual images of the patient's head; these individual images are called "basis images." Computer software takes these 500+ images and creates small discrete image volumes, called "voxels" that the software can reassemble into sagittal, coronal, and axial images of the patient's head. The voxels vary in size from 0.09 to 0.45 mm and will determine the overall resolution of the image we are viewing.

Currently, CBCT units designed specifically for dental purposes are expensive, ranging from about \$160,000 to more than \$300,000; however, when compared with the cost of medical CBCT and CT units they are inexpensive and provide truly amazing detail not available in any other dental imaging system. Examples of CBCT volumes are shown in Figures 16-5 to 16-10.

Figure 16-5A–E represents the detail associated with a "small volume" CBCT unit with a voxel size of 0.125 mm. Observe the exquisite bony detail depicted in this case of cementifying fibroma. Even though these are motionless images, the software permits moving the section we view in increments of 0.25 to 1 mm (Figs. 16-5C–E) or more in any direction within three-dimensional space in real time. The thicknesses of the section below are 1-mm thick.

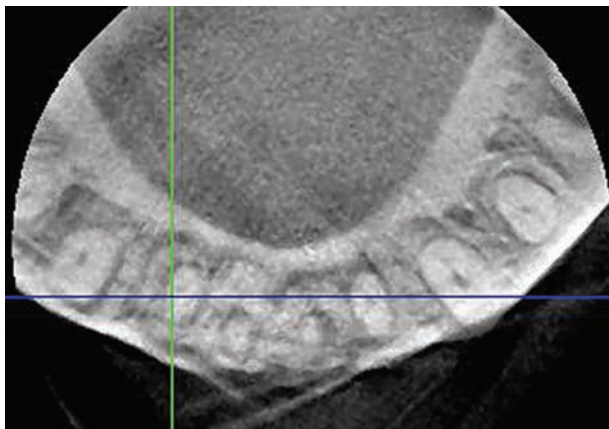


Figure 16-5A.

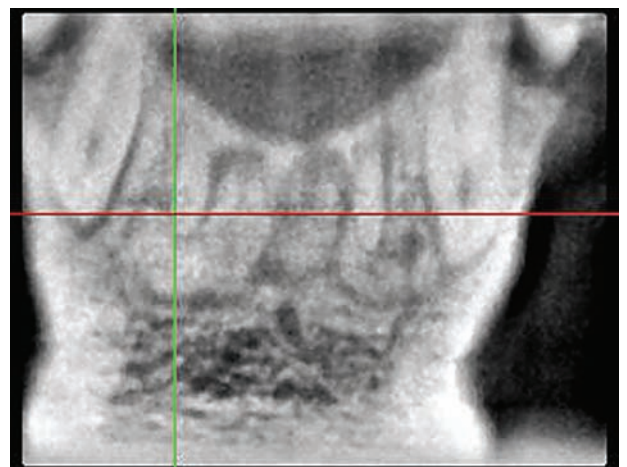


Figure 16-5B.

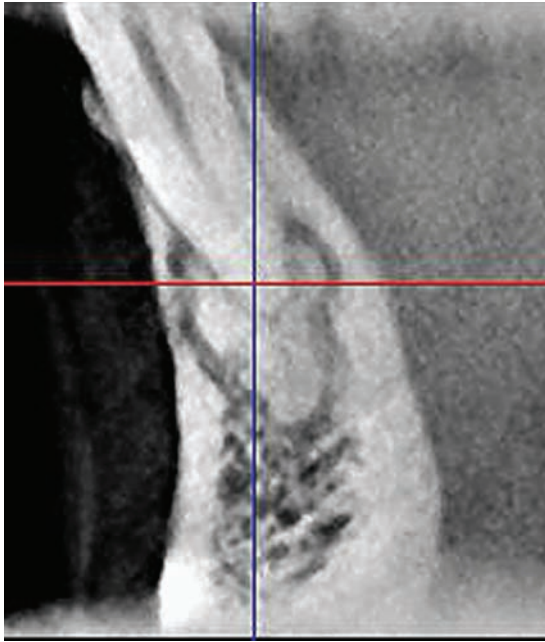


Figure 16-5C.

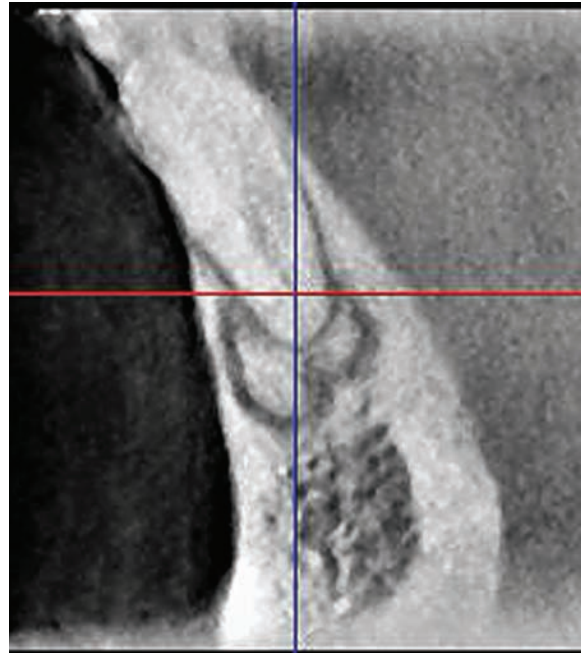


Figure 16-5D.

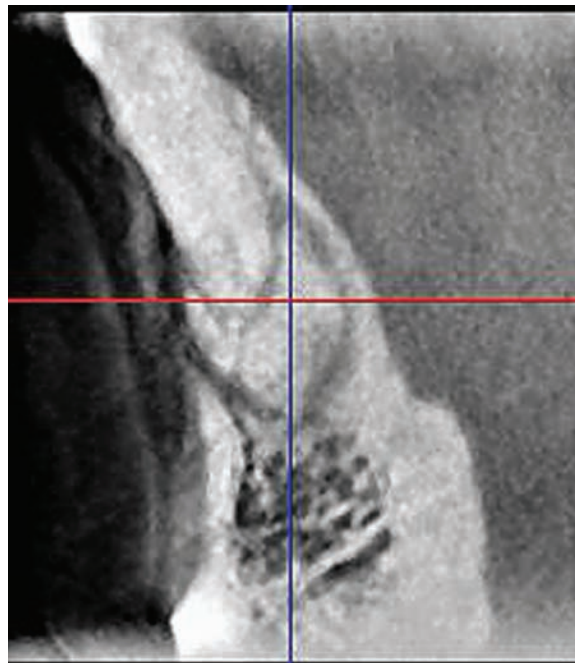


Figure 16-5E.

One of the major benefits of CBCT is their use in precisely identifying the quality and thickness of bone in prospective implant sites as well as clearly identifying and delineating areas of pathology. The technology also provides uncompromised detail for evaluating potential root fractures, or potential complications associated with symptomatic endodontically treated teeth or pre oral surgical evaluation of impacted third molars and their relationship to adjacent teeth, maxillary sinus, or mandibular canal.

The sections shown below in Figure 16-6A–C illustrate a small odontoma located between and lingual to the canine and first premolar.

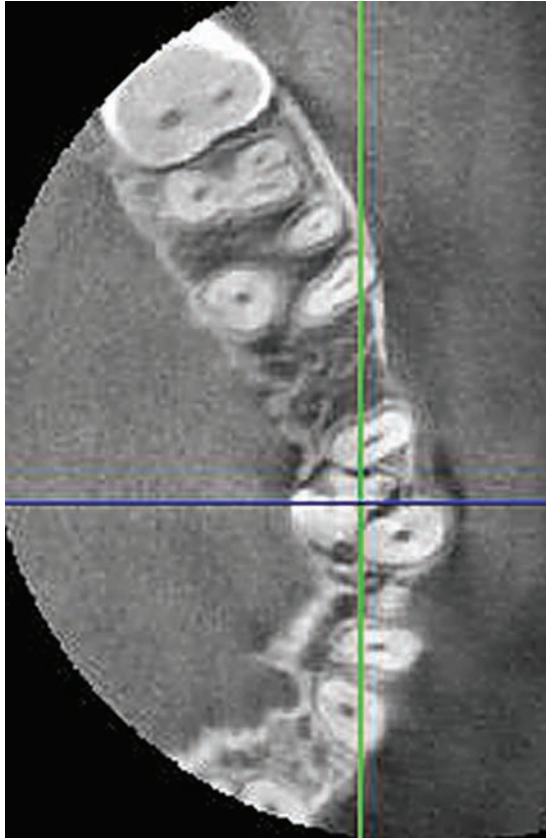


Figure 16-6A.

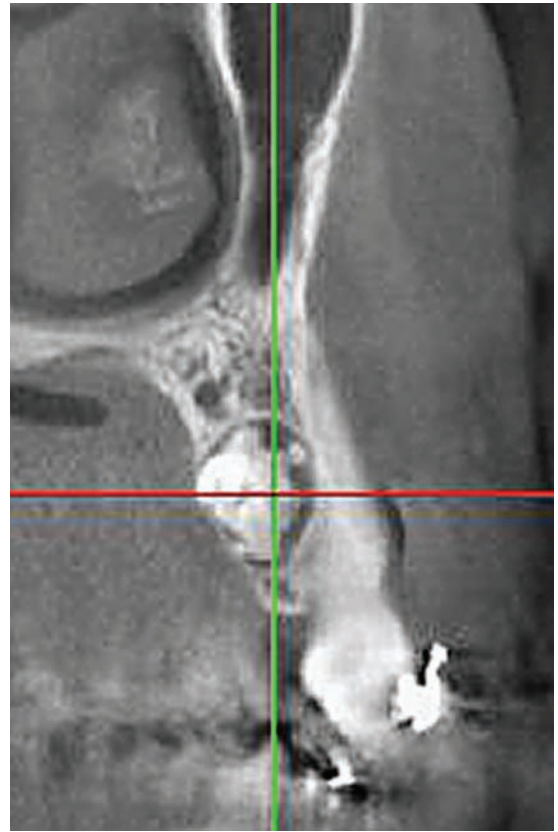


Figure 16-6B.

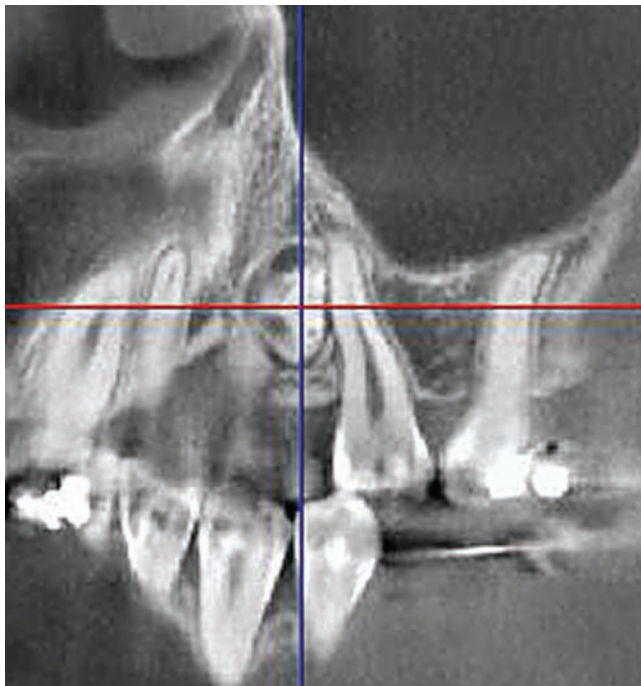


Figure 16-6C.

Figure 6-7A,B is an example of an acute maxillary sinusitis; note the small bubbles in the fluid filling the sinus.

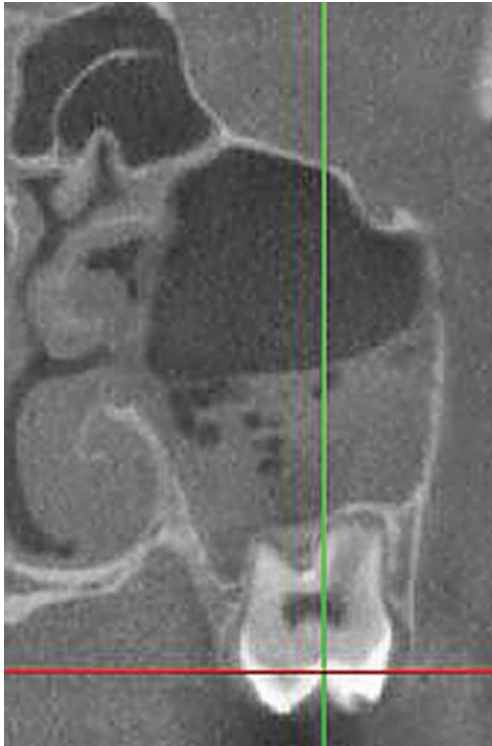


Figure 16-7A.

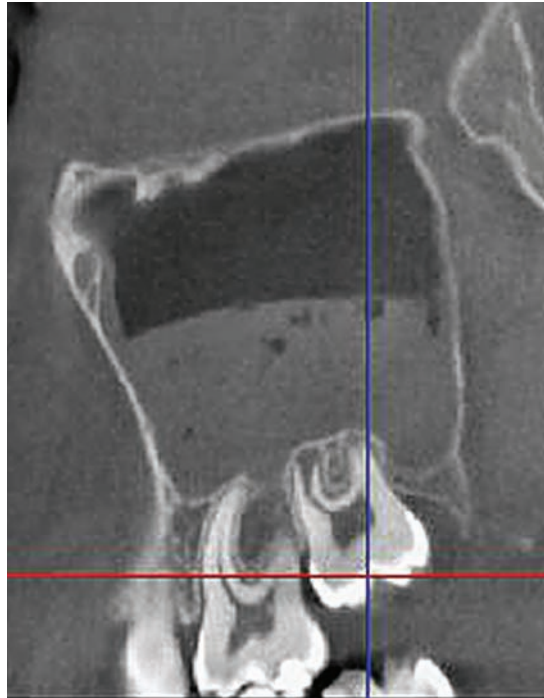


Figure 16-7B.

Figure 16-8A,B shows how clearly endodontic problems are depicted in the CBCT images; note the resorption of the root apex of the second premolar.

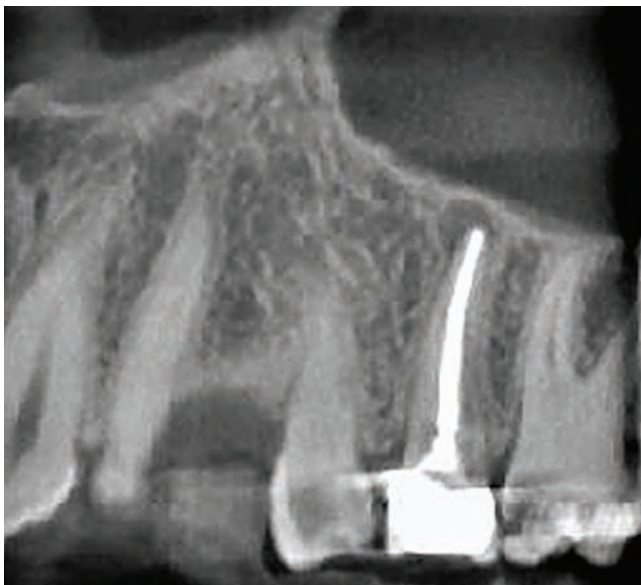


Figure 16-8A.



Figure 16-8B.

Figure 16-9 shows a recent extraction with bone graft material in the extraction socket. Distal to the extraction socket is a well circumscribed “mixed” (combination of radiolucent and radiopaque features) indicative of some type of residual pathology; the inferior portion of the lesion has eroded the superior border of the mandibular canal.

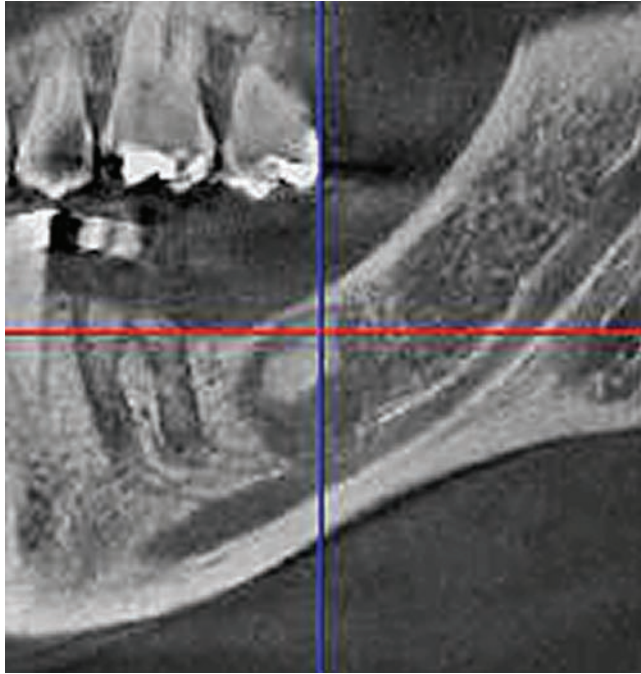


Figure 16-9. Recent Extraction

Figure 16-10A–C illustrates an example of a “large volume” CBCT unit that can be used to evaluate the entire oral-maxillofacial complex. Large volume CBCT images may be utilized in three-dimensional analysis of the maxillofacial complex in pre- and post treatment planning for orthognathic surgery and orthodontic treatment as well as multiple implant site planning.

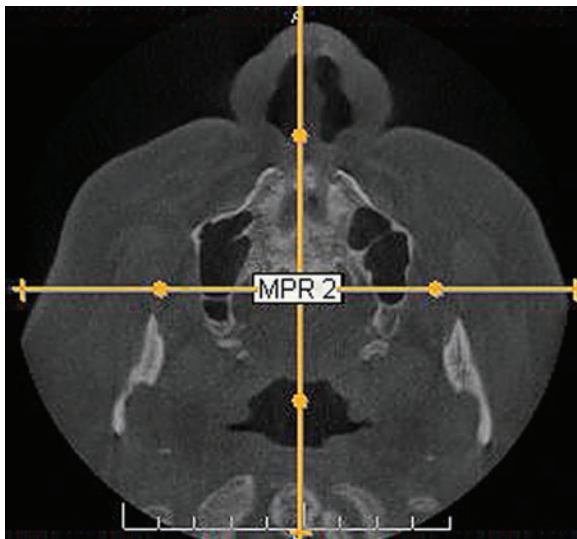


Figure 16-10A.



Figure 16-10B.



Figure 16-10C. Image from Large Volume CBCT Unit.
An example of a CBCT image used to evaluate the entire oral-maxillofacial complex.

SECTION 5 READY REFERENCES

NOTE: The Ready References in this book may be removed from the book by tearing along the perforated lines on each page. Laminating or placing these pages in plastic protector sheets will allow them to be disinfected for use in a clinical setting.

Ready Reference 16-1. Helpful Concepts in Radiology

Minimally Diagnostically Acceptable—with reference to a CMRS/FMX, at the very least each interproximal space should be visible somewhere without significant overlap.

Significant overlap is an overlap that is more than one-half the width of the enamel or obscures the dentinoenamel junction (DEJ) and each root apex at least once.

Rule of Symmetry—or right side left side check—is based on the principle that most human beings are symmetrical in appearance, that is, the right side looks like the left side.

• **EXAMPLE: Assessing for periapical pathology:**

- When assessing for the presence of periapical pathology the clinician should first look at the apex of the right first molar and then immediately compare it to the apex of the left first molar.
- When evaluating symmetry, the question the clinician should ask is: “Does the right root look like the left?”
- If the answer is “yes, they both look alike,” then the roots are probably normal.
- If the answer is “no,” then the question becomes “why not?” The clinician’s task is to identify what makes one root apex different from the one on the opposite side of the mouth.
- Continue assessing the right and left sides in this manner. For example, if you see caries on the mesial surface of the right maxillary second premolar, immediately look at the mesial surface of the left maxillary second premolar. This technique really works and you will be amazed at how many deviations and variations you will find if you persist in using this strategy.

Thorough Assessment. A thorough assessment involves looking for more than caries and periodontal disease.

- A quick glance at any pathology textbook or the relevant sections of your radiology textbook will reveal a vast array of conditions that can manifest in the oral cavity in many subtle and not-so-subtle ways.
- It is appropriate that your radiographic assessment be sufficiently sensitive and thorough such that you can identify deviations and variations from normal.
- The rule of symmetry method of evaluating individual teeth and/or areas of the jaw is a highly effective strategy.

Radiographic Evaluation Worksheet

Directions: Complete the four steps listed below.
Attach additional sheets to this form as needed.

1. *Diagnostic Acceptability:* Do these radiographs exhibit the criteria for meeting minimal diagnostic acceptability? If not, why?
2. *Technique:* List any significant technique or processing errors that will influence your ability to correctly evaluate all of the relevant dental structures?
3. *Normal Anatomic Structures:* List the “normal” anatomic structures observable on the radiographs.
4. *Systematic Assessment:* Conduct a thorough assessment of the teeth and supporting structures and provide a written summary of your findings.

Figure 16-11. Radiographic Evaluation Worksheet.

Ready Reference 16-2. Radiographic Evidence of Bone Loss

RADIOGRAPHIC EVIDENCE OF THE EXTENT OF BONE LOSS

- **Slight**—the crest of the alveolar bone is approximately 3 to 4 mm apical to the CEJ.
- **Moderate**—crest of the alveolar bone is approximately 4 to 5 mm apical to the CEJ.
- **Severe/Advanced**—crest of the alveolar bone is more than 5 mm apical to the CEJ or the bone covers less than one-half of the anatomic root length as measured from the CEJ to the root apex.



Figure 16-12A. Slight Bone Loss

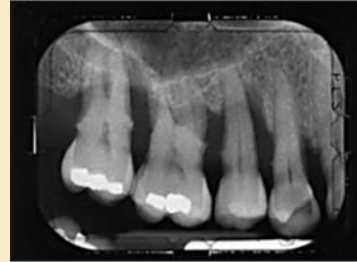


Figure 16-12B. Severe Bone Loss

RADIOGRAPHIC EVIDENCE OF THE DISTRIBUTION OF BONE LOSS

- **Generalized**—bone loss involving more than 50% of the erupted teeth in one arch.
- **Localized**—bone loss involving fewer than fifty-percent of the erupted teeth in one arch.
- When noting such conditions in the patient's record, it is appropriate to identify where the localized lesions occur—such as “mandibular R and L central and lateral incisor region.”



Figure 16-12C. Generalized Bone Loss



Figure 16-12D. Localized Bone Loss

RADIOGRAPHIC EVIDENCE OF THE PATTERNS OF BONE LOSS

- **Horizontal Pattern of Bone Loss**—is a fairly uniform reduction in the height of the bone radiographically throughout an arch or quadrant.
- **Vertical Pattern of Bone Loss**—is an uneven pattern of bone loss that typically involves a single tooth: this uneven pattern of bone loss leaves a trench-like area of missing bone alongside the root.

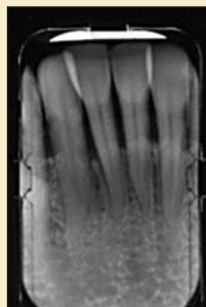


Figure 16-12E. Horizontal Pattern



Figure 16-12F. Vertical Pattern

Ready Reference 16-3. Internet Resources: Dental Radiographs

<http://www.ada.org/prof/resources/topics/radiography.asp>

ADA, FDA Guide to Patient Selection for Dental Radiographs on the website of the **American Dental Association**.

<http://www.kodak.com/global/plugins/acrobat/en/health/pdf/prod/dental/N-80A.pdf>

A PDF booklet, **Guidelines for Prescribing Radiographs**, is available for download from this **Kodak Dental Systems** website.

<http://www.dent.ohio-state.edu/radiologycarie/tips.htm>

An excellent self-instructional module on **Interpretation Tips** on the website of the **College of Dentistry, Ohio State University**. This module allows the viewer to select a radiograph by number, evaluate it, and click to read the answer.

http://www.ada.org/public/topics/xrays_faq.asp

Information for patients on how x-rays work and other common questions about radiographs on the website of the **American Dental Association**.

<http://www.cda.org/articles/xrays.htm>

Fact sheet for patients on dental x-rays on the website of the **California Dental Association**.

<http://www.eapd.gr/Guidelines/EAPD%20Radiograph%20Guidelines%202003.pdf>

Guidelines for the use of dental radiographs in children from the European Association of Pediatric Dentistry reprinted in the Journal of Canadian Dentistry.

http://www.colgate.com/app/Colgate/US/OC/Information/ADA.cvsp?ADA_Article5Article_2005_07_ADAX-RaySafety

Article on the benefits versus the risks of dental radiographs, an ADA News Update, reprinted on the **Colgate Oral Care** website.

<http://pregnancytoday.com/reference/articles/pregdental.htm>

Common concerns that pregnant women have about radiographs, an article by Kimberly A. Loos, D.D.S., on the website of **Pregnancy Today**.

SECTION 6 THE HUMAN ELEMENT

Box 16-1. Tips from an Experienced Clinician

LIMITATIONS OF RADIOGRAPHS

Keep in mind the fact that periapical and interproximal/bite-wing radiographs are two-dimensional representations of a three-dimensional object, and changes in alveolar bone facial or lingual to the tooth may be obscured by the superimposition of the tooth and the overlying alveolar bone. In addition, alveolar bone height will vary depending on the radiographic technique used to capture the image; in general, bisecting-angle radiographs will produce more distortion of the tooth and alveolar bone compared to radiographs obtained using the paralleling principle.

KEY FEATURES OF RADIOGRAPHIC ACCURACY

Key features of radiographic accuracy to look for prior to attempting any interpretation, especially of alveolar bone height are:

- Radiographic superimposition of the buccal and lingual cusp tips on posterior teeth
- Absence of interproximal overlap potentially obscuring the cemento-enamel junction (CEJ)
- Radiographs of sufficient density (darkness) to permit identification of the CEJ

USING RADIOGRAPHS IN PATIENT EDUCATION

Note: the radiographs on Patient A can be extremely useful in educating a patient regarding the extent and severity of his/her disease. For example, the big easily discerned chunks of calculus on the interproximal spaces can be useful in explaining the “inflammatory” nature of the periodontal disease process—if you have patients consider the relationship of a splinter in their finger with the subsequent reddening and potential infection should the splinter not be removed in a timely fashion. Similarly, calculus can be portrayed as causing a similar effect in the gum tissues as that of a splinter. The patient should be able to recognize bone loss in the posterior areas of the maxilla if you identify the CEJ as the level where the bone level should be “normally.”

MASTERING RADIOGRAPHIC INTERPRETATION

As a beginning student of radiographic interpretation it is easy to feel overwhelmed by the importance of recognizing, sometimes very subtle changes in bony architecture, that can have important consequences in terms of patient care and treatment. As with any skill development, it will take time and patience. Develop a systematic approach to analyzing your radiographs so that you know you are covering all of the essential elements. You may wish to start by developing a “check list” of normal anatomic structures, and another list of deviations and variations from normal that have clinical implications: caries, calculus, calcified pulps, dens-in-dente, periapical radiolucencies/radiopacities, etc., simply as a reminder to look for each of these things. With repetition and implementation of the rule of symmetry, you will find your radiographic assessment skills will increase significantly.

TABLE 16-1. English to Spanish Phrase List for Radiographs

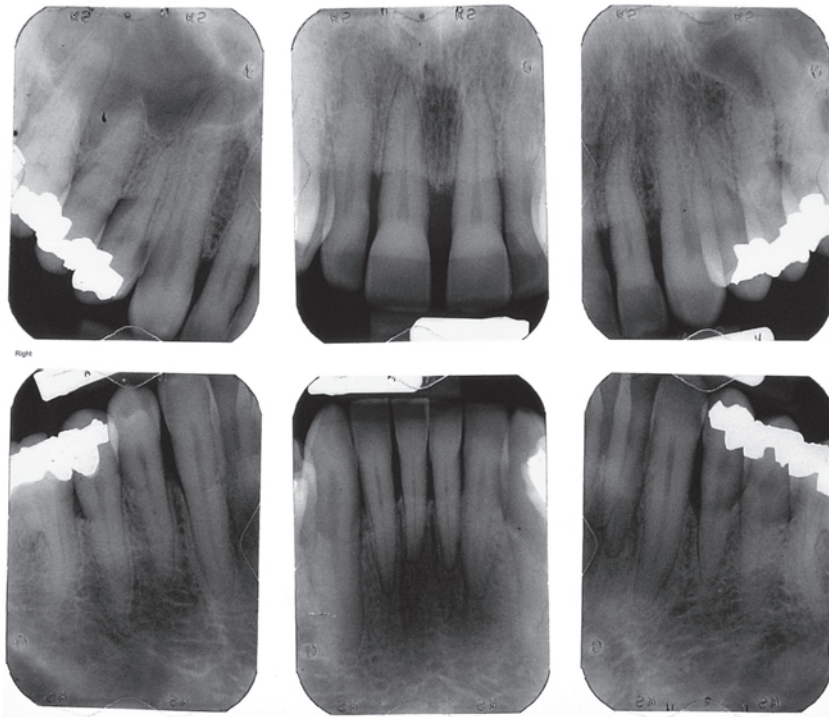
X-rays (radiographs) help us to better understand your dental needs.	Las radiografías nos ayudan entender sus necesidades dentales.
Let me show you some things that I found on your x-rays (radiographs).	Le voy ha enseñar unas cosas que he encontrado en sus radiografías.
The x-rays show us that you have a cavity/decay. (Clinician points to relevant area.)	Las radiografías enseñan que usted tiene un carie/caries.
Cavities show up as black, dark gray areas on your teeth.	Caries se muestran como áreas negras o gris en sus dientes.
The x-ray shows us you may have an infected tooth (abscess). See the dark area around the root of this tooth? (Clinician can compare this to a tooth that has normal bone, so patient can see the difference.)	Las radiografías indican que puede tener un diente infectado (absceso). ¿Nota el área oscura alrededor de la raíz de este diente?
The x-rays show us bone loss around these teeth. (Clinician points to relevant areas.)	Las radiografías indican pérdida de hueso alrededor de estos dientes.
The normal bone level should be here.	El nivel de hueso normal debe estar aquí.
Your bone level is here.	Su nivel de hueso esta aquí.
Do you have any questions about x-rays?	¿Tiene alguna pregunta sobre sus radiografías?
I am going to get my clinic instructor.	Voy ha buscar mi instructor.

SECTION 7 PRACTICAL FOCUS—FICTITIOUS PATIENT CASES

DIRECTIONS:

- This section shows the radiographs for fictitious patients A, C, D, and E.
- Patient D's radiographs provide an example of a thorough evaluation using the steps outlined in **Peak Procedure 16-2** in this module. Use **Peak Procedure 16-2** and the **Radiograph Evaluation Worksheet** to assess the radiographs for Patients A, C, and E.
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.
- Note: The clinical photographs and radiographs in a fictitious patient case are for illustrative purposes but not necessarily from the same individual. The fictitious patient cases are designed to enhance the learning experiences associated with each case.

EXAMPLE: FICTITIOUS PATIENT CASE D: Mrs. Donna Doi



Right

Figure 16-13A.

Left

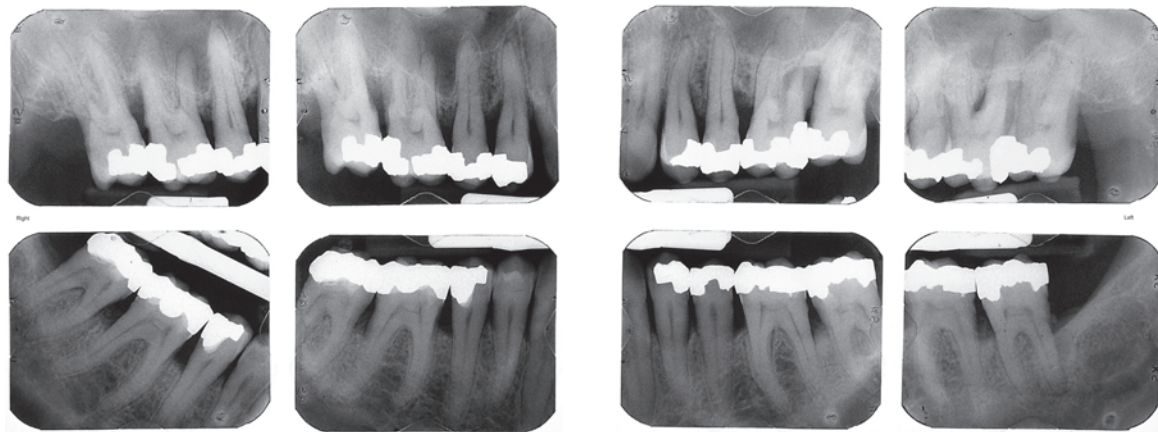


Figure 16-13B.

Figure 16-13C.

Figure 16-13. Radiographs of Mrs. Doi.

Example: Radiographic Evaluation for Patient Case D.**1. Diagnostic Acceptability. Ask the question, “Do these radiographs exhibit the criteria for meeting minimal diagnostic acceptability?” If not, why not?**

- This series of radiographs consists of 14 periapical radiographs of Patient D. There are no interproximal/bitewing radiographs available.
- The paralleling principle was used and there is good superimposition of the cusps suggesting minimal image distortion.
- Each interproximal space may be seen at least once—somewhere. However, each root apex is not visible at least once; the distal root of the R mandibular 2nd molar is not visible.
- **Conclusion: no, the set of radiographs does not exhibit minimal diagnostic acceptability.** We would need to retake the mandibular R molar periapical radiograph. Note, several of the individual radiographs exhibit rather severe horizontal overlapping of interproximal spaces, you might feel that the interproximal space of the maxillary L 1st and 2nd molars is not adequately open, but the chapter author considers this to be “minimally” acceptable but not ideal.

2. Technique. Ask the question, “Are there any significant technique or processing errors that will influence my ability to correctly evaluate all of the relevant dental structures?”

- There are no obvious processing errors but several of the periapical radiographs exhibit less than optimal film placement: for example, the maxillary and mandibular R and L canine regions do not center the canines well; the maxillary central incisor radiograph is slightly off center but this doesn’t effect the diagnostic value, only the “esthetic” value of the radiograph.
- The mandibular R molar periapical is tipped cutting off the apices of the premolars; however, these apices are visible on the premolar radiograph.
- The maxillary left molar periapical exhibits severe overlap of all interproximal spaces.

Problem Solving: Is the overlap of the maxillary left molar radiograph due to excessive horizontal angulation from the mesial, or distal? How can you tell? (Hint: look up “Clark’s Technique/shift-shot/buccal-object rule” in your textbook if you don’t know.)

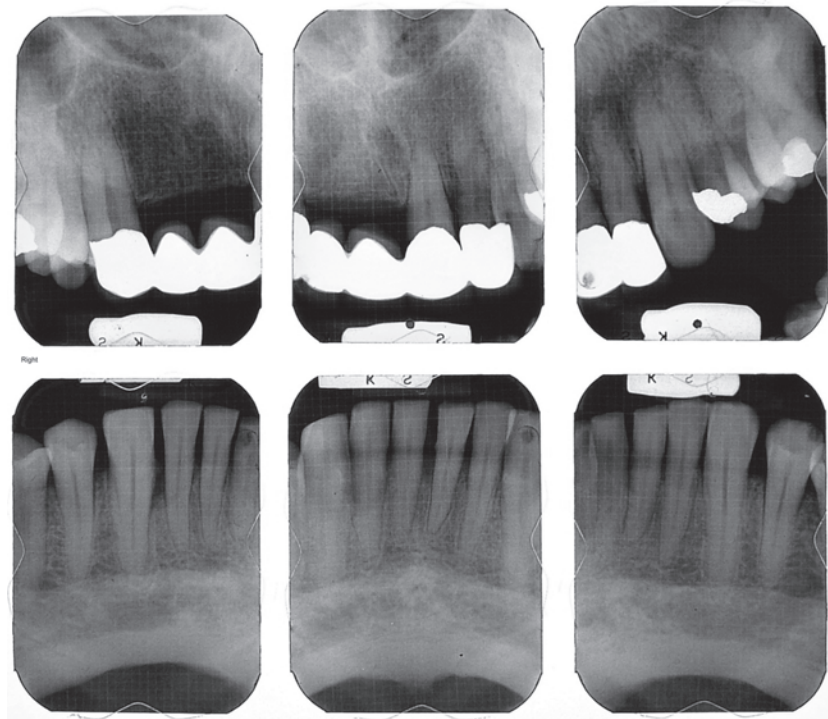
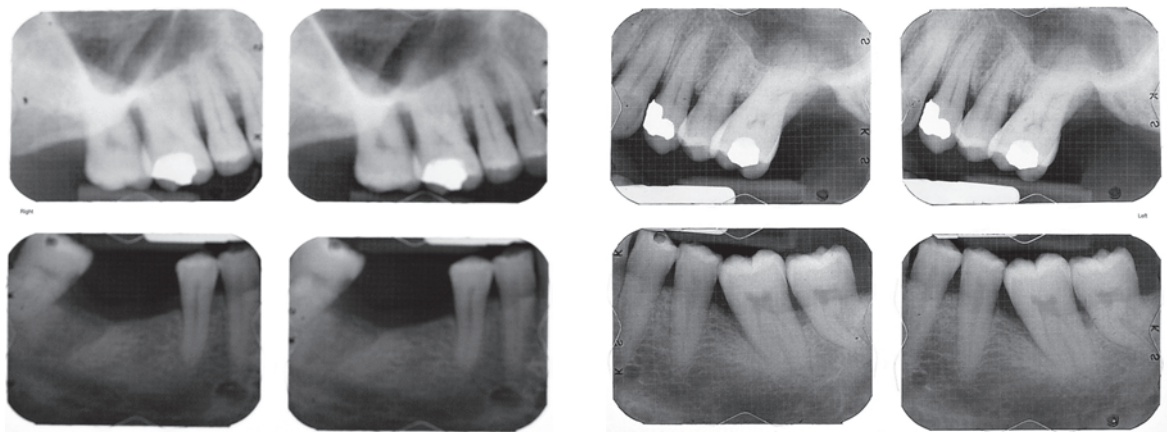
3. Normal Anatomic Structures. Recognize the “normal” anatomic structures observable on the radiographs. Radiographically visible “normal” anatomic structures on each of Patient D’s radiographs include:

- Maxillary R molar: maxillary sinus, lower border of the maxillary sinus, tuberosity of the maxilla
- Maxillary R premolar: maxillary sinus, anterior and lower borders of the maxillary sinus
- Maxillary R canine: large portion of the maxillary sinus and anterior border of the maxillary sinus, a small portion of the lower border of the nasal fossa may be seen along the upper mesial corner of the radiograph.
- Maxillary central incisor: incisive foramen is easily seen between the two central incisors, tiny bit of the anterior nasal spine; the nasal fossa and the lower border of the nasal fossa are not easily discerned; a faint radiopacity corresponding to the tip of the nose may also be seen. The lip line is discernable along the central and lateral incisal edges.
- Maxillary L canine: anterior portion and border of the maxillary sinus.
- Maxillary L premolar: maxillary sinus, lower and anterior border of the maxillary sinus

- Maxillary L molar: maxillary sinus, lower border of the maxillary sinus, tuberosity of the maxilla, coronoid process of the mandible
 - Mandibular R molar: external oblique line (distal to 2nd molar), a small portion of the submandibular fossa is visible along the lower distal corner of the radiograph
 - Mandibular R premolar: none noted
 - Mandibular R canine: the submandibular fossa may be slightly visible due to angulation at the lower distal edge of the radiograph—no other anatomic structures noted
 - Mandibular central incisor: genial tubercles are barely visible at the bottom of the radiograph. Nutrient canals are visible as thin vertical radiolucent lines.
 - Mandibular L canine: The mental foramen is visible between the apex of the 2nd premolar and 1st molar.
 - Mandibular L premolar: none noted, possibly the submandibular fossa along the lower distal edge of the film
 - Mandibular L molar: external oblique line, mandibular canal
- 4. Systematic Assessment. Conduct a thorough assessment of the teeth and supporting structures and provide a written summary of your findings.**

There were no significant deviations or variations in the symmetry of pulp chambers, no periapical radiolucencies were noted, restorations appear to be clinically acceptable, no open contacts or significantly rotated teeth. Heavy calculus deposits were noted in all four quadrants and there is generalized moderate to severe alveolar bone loss throughout the mandible and maxilla. Bone loss is especially severe around the distal buccal roots of the maxillary R and L 1st molars. Increased radiolucency in the trifurcations of the maxillary 1st molars, maxillary R 2nd molar; the bifurcation of the mandibular R 2nd molar exhibits an increased radiolucency and the PDL in the bifurcation area is radiographically more prominent when compared to the other mandibular molar teeth (rule of symmetry).

Problem Solving Answer: *If you identified the excessive horizontal overlap of the interproximal spaces as due to excessive horizontal angulation due to positioning the central ray of the x-ray unit too far from the DISTAL, you are correct. According to Clark's Rule, objects on the lingual move in the direction of tube-shift. If you look closely at the position of the 1st molar root apices, the lingual and distal-buccal roots are superimposed. Excessive angulation from the mesial would cause the mesial-buccal and lingual roots to overlap.*

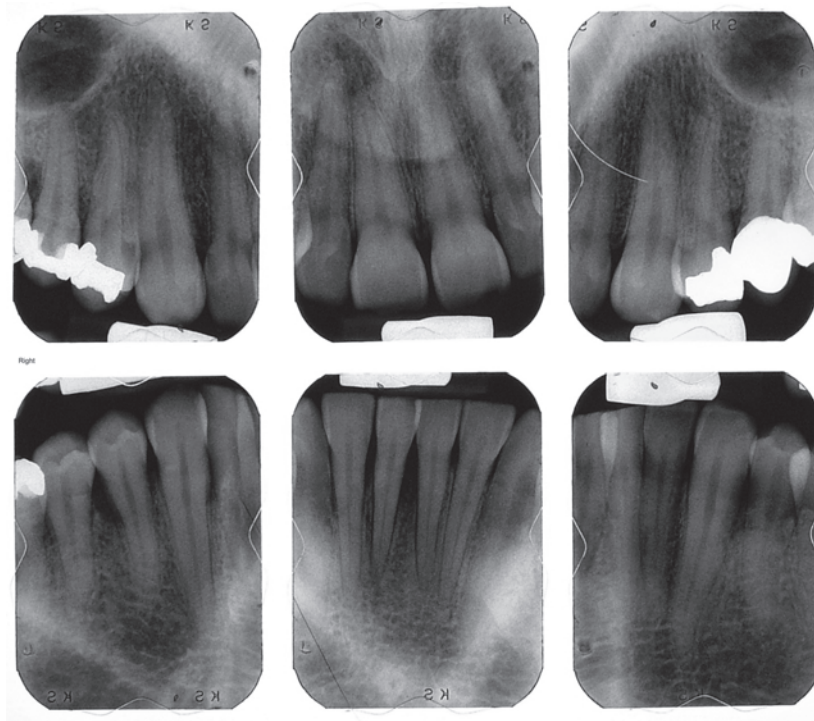
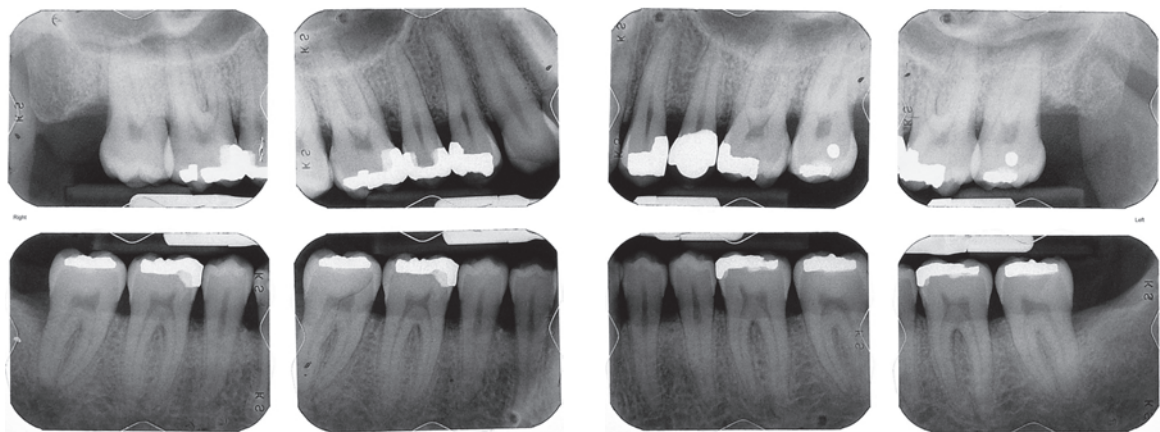
FICTITIOUS PATIENT CASE A: Mr. Alan Ascari**Right****Figure 16-14A****Left****Figure 16-14B****Figure 16-14C****Figure 16-14. Radiographs for Mr. Ascari.**

Radiographic Evaluation Worksheet

Directions: Complete the four steps listed below.
Attach additional sheets to this form as needed.

1. *Diagnostic Acceptability:* Do these radiographs exhibit the criteria for meeting minimal diagnostic acceptability? If not, why?
2. *Technique:* List any significant technique or processing errors that will influence your ability to correctly evaluate all of the relevant dental structures?
3. *Normal Anatomic Structures:* List the “normal” anatomic structures observable on the radiographs.
4. *Systematic Assessment:* Conduct a thorough assessment of the teeth and supporting structures and provide a written summary of your findings.

Figure 16-15. Radiographic Evaluation Worksheet for Mr. Ascari.

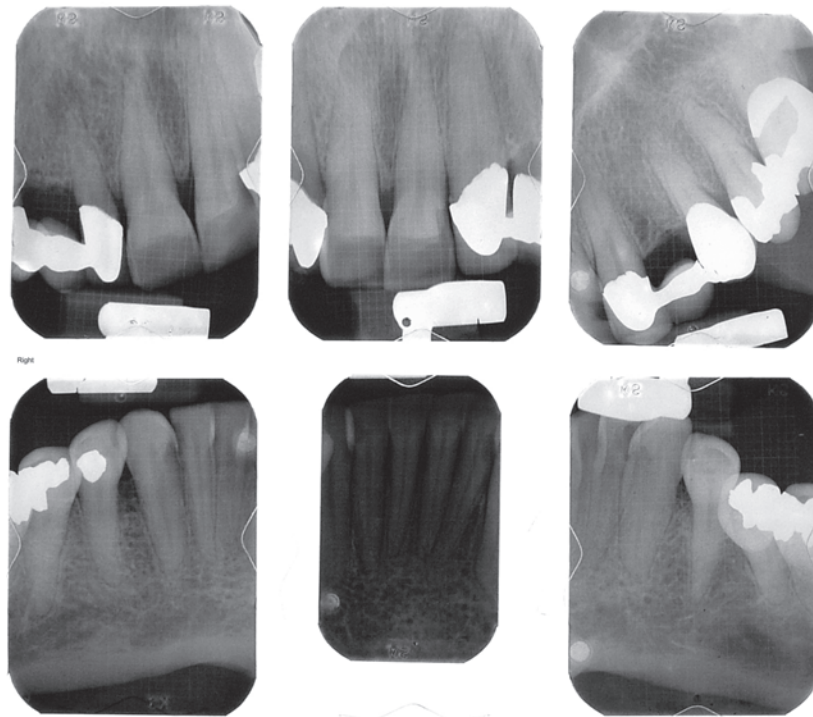
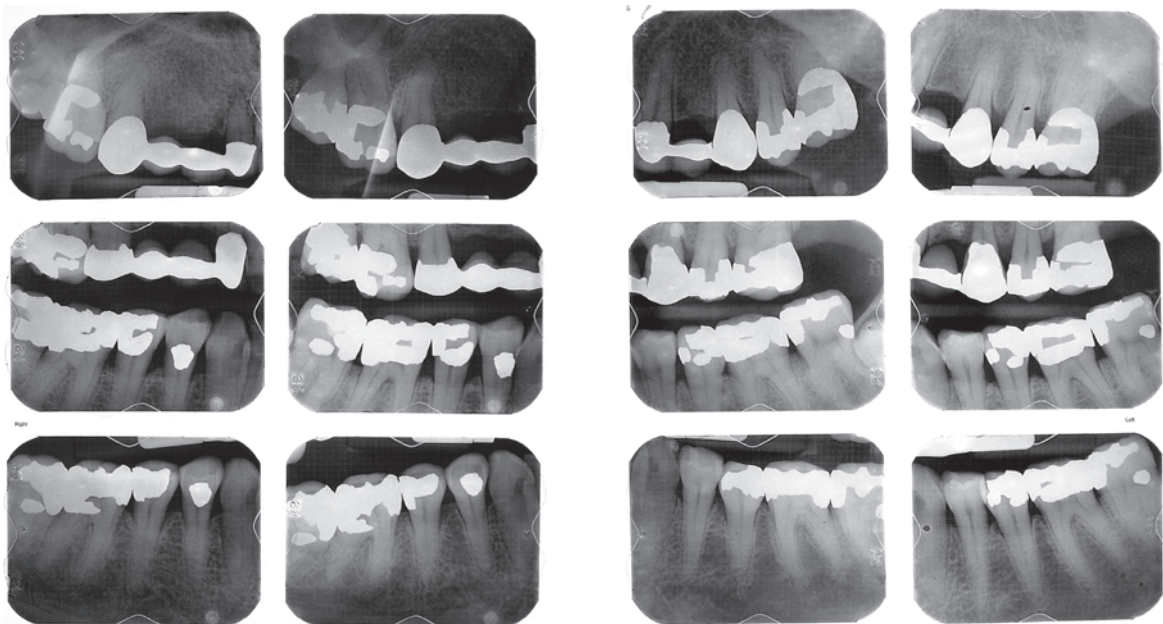
FICTITIOUS PATIENT CASE C: Carlos Chavez**Right****Figure 16-16A****Left****Figure 16-16B****Figure 16-16C****Figure 16-16. Radiographs for Mr. Chavez.**

Radiographic Evaluation Worksheet

Directions: Complete the four steps listed below.
Attach additional sheets to this form as needed.

1. *Diagnostic Acceptability:* Do these radiographs exhibit the criteria for meeting minimal diagnostic acceptability? If not, why?
2. *Technique:* List any significant technique or processing errors that will influence your ability to correctly evaluate all of the relevant dental structures?
3. *Normal Anatomic Structures:* List the “normal” anatomic structures observable on the radiographs.
4. *Systematic Assessment:* Conduct a thorough assessment of the teeth and supporting structures and provide a written summary of your findings.

Figure 16-17. Radiographic Evaluation Worksheet for Mr. Chavez.

FICTITIOUS PATIENT CASE E: Esther Eads**Right****Figure 16-18A****Left****Figure 16-18B****Figure 16-18C****Figure 16-18. Radiographs for Ms. Eads.**

Radiographic Evaluation Worksheet

Directions: Complete the four steps listed below.
Attach additional sheets to this form as needed.

1. *Diagnostic Acceptability:* Do these radiographs exhibit the criteria for meeting minimal diagnostic acceptability? If not, why?
2. *Technique:* List any significant technique or processing errors that will influence your ability to correctly evaluate all of the relevant dental structures?
3. *Normal Anatomic Structures:* List the “normal” anatomic structures observable on the radiographs.
4. *Systematic Assessment:* Conduct a thorough assessment of the teeth and supporting structures and provide a written summary of your findings.

Figure 16-19. Radiographic Evaluation Worksheet for Miss Eads.

SECTION 8 PRACTICAL FOCUS—PANORAMIC RADIOGRAPHS

DIRECTIONS:

- This section has three panoramic radiographs for interpretation.
- Please provide a brief description of the radiographic findings to include, but not limited to, the following, if present, for each panoramic radiograph:
 - Missing teeth
 - General description of alveolar bone height in each arch
 - Presence or absence of calculus, caries, periapical pathology (if any)
 - Dental restorative materials
 - Any radiographic “deviations” from normal.
- The pages in this section may be removed from the book for easier use by tearing along the perforated lines on each page.

PANORAMIC RADIOGRAPH I



Figure 16-20. Panoramic Radiograph I.

PANORAMIC RADIOGRAPH 2

Figure 16-21. Panoramic Radiograph 2.

PANORAMIC RADIOGRAPH 3



Figure 16-22. Panoramic Radiograph 3.

PANORAMIC RADIOGRAPH 4

Figure 16-23. Panoramic Radiograph 4.

PANORAMIC RADIOGRAPH 5



Figure 16-24. Panoramic Radiograph 5.

PANORAMIC RADIOGRAPH 6

Figure 16-25. Panoramic Radiograph 6.

SECTION 9 QUICK QUESTIONS

1. Radiographs can and should be used as the primary diagnostic tool because they are highly accurate representations of the patient's oral health.
 - A. True
 - B. False
2. Typically, normal alveolar bone height radiographically is _____mm below and _____ to the CEJ of adjacent teeth.
3. Describe the radiographic changes associated with early radiographic evidence of alveolar bone loss.
4. What is the difference between horizontal bone loss and vertical bone loss?

5. When interpreting a full mouth set of radiographs (FMX/CMRS), each radiographic region should be technically perfect in terms of pocket placement, horizontal angulation, processing—basically free of all errors.
- A. True
 - B. False
6. The radiographic differentiation between slight to moderate, to severe/advanced alveolar bone loss is determined by evaluating the loss of bone relative to the CEJ. “Slight” bone loss is represented by the alveolar crest being located approximately _____mm below the CEJ; “moderate” alveolar bone loss is _____mm below the CEJ; and “severe/advanced” alveolar bone loss _____mm below the CEJ.

SECTION 10 SKILL CHECK

TECHNIQUE SKILL CHECKLIST

DENTAL RADIOGRAPHS

Student: _____

Evaluator: _____

Date: _____

DIRECTIONS FOR STUDENT: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E**. Indicate: **S** (satisfactory) or **U** (unsatisfactory). An optional overall performance assessment may be conducted by comparing the student's written assessment with that of the evaluator.

Criteria:	S	E
Defines the term minimal diagnostic acceptability .		
Given a set of CMRS/FMX, determines if the radiographs exhibit the criteria for meeting minimal diagnostic acceptability.		
Recognizes and lists in writing any significant technique or processing errors that would influence a clinician's ability to correctly evaluate all the relevant dental structures on the radiographs.		
Lists in writing the "normal" anatomic structures observable on the radiographs.		
Conducts a thorough assessment of the teeth and supporting structures and provides a written summary of his or her findings.		

OPTIONAL: SATISFACTORY PERFORMANCE CRITERIA

Student written assessment is in 80% agreement with the evaluator's assessment.

COMMUNICATION SKILL CHECKLIST

DENTAL RADIOGRAPHS

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of the patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS FOR STUDENT CLINICIAN: Use **Column S**, evaluate your skill level as: **S** (satisfactory) or **U** (unsatisfactory).

DIRECTIONS FOR EVALUATOR: Use **Column E** to record your evaluation of the student clinician's communication skills during the role-play. Indicate: **S** (satisfactory) or **U** (unsatisfactory). Each **S** equals 1 point, each **U** equals 0 points.

Criteria:	S	E
Explains to the patient how radiographs help clinicians to better understand a patient's dental needs.		
Points out and explains findings on the radiographs to the patient.		
Encourages patient questions.		
Answers the patient's questions fully and accurately.		
Communicates with the patient at an appropriate level avoiding dental/medical terminology or jargon.		
Accurately communicates the findings to the clinical instructor. Discusses the implications for dental treatment using correct medical and dental terminology.		
OPTIONAL GRADE PERCENTAGE CALCULATION		
Total "S"s in each I column.		
Sum of "S"s _____ divided by Total Points Possible (6) equals the Percentage Grade _____		

Module 17

Comprehensive Patient Cases F–K

MODULE OVERVIEW

Module 17 presents six fictitious patient cases, patients F–K. The fictitious patient cases in this module provide opportunities to practice interpreting and communicating assessment information.

MODULE OUTLINE

SECTION 1	Patient F	638
SECTION 2	Patient G	646
SECTION 3	Patient H	653
SECTION 4	Patient I	659
SECTION 5	Patient J	667
SECTION 6	Patient K	675
SECTION 7	Focus on Communication	682

SKILL GOALS

- Demonstrate knowledge of information-gathering and evaluation by applying concepts from the modules in this book to fictitious Comprehensive Patient Cases F–K.
- During a role-play, provide information to each patient about his or her assessment findings.
- During a role-play, accurately communicate the assessment findings to the clinical instructor. Discuss the implications for dental treatment using correct medical and dental terminology.

SOURCES OF CLINICAL PHOTOGRAPHS

The author gratefully acknowledges the sources of the clinical photographs in this chapter:

Case F

- Figure 17-4. Dr. Michael A. Huber, University of Texas Health Science Center at San Antonio, San Antonio, TX.
- Figure 17-5. Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.
- Figure 17-6. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-7. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-8. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.

Case G

- Figure 17-12. Image provided by *Stedman's*.
- Figure 17-13. Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.
- Figure 17-14. Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.
- Figure 17-15. Dr. John S. Dozier, Tallahassee, FL.
- Figure 17-16. Dr. John S. Dozier, Tallahassee, FL.
- Figure 17-17. Dr. John Preece, Dental Diagnostic Science, University of Texas Health Science Center at San Antonio, San Antonio, TX.

Case H

- Figure 17-21. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams and Wilkins; 2003.
- Figure 17-22. Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.
- Figure 17-23. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-24. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.

Case I

- Figure 17-28. Image provided by *Stedman's*.
- Figure 17-29. Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-30. Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-31. Courtesy of Dr. Michael A. Huber, University of Texas Health Science Center at San Antonio, San Antonio, TX.
- Figure 17-32. Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-33. Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-34. Courtesy of Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-35. Courtesy of Dr. John Preece, Dental Diagnostic Science, University of Texas Health Science Center at San Antonio, San Antonio, TX.

Case J

- Figure 17-39. Dr. Charles Goldberg, University of California San Diego School of Medicine, San Diego, CA.
- Figure 17-40. Image provided by *Stedman's*.
- Figure 17-41. Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.
- Figure 17-42. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-43. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-44. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.

Case K

- Figure 17-48. From Goodheart HP. *Goodheart's Photoguide of Common Skin Disorders*, 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2003.
- Figure 17-49. Dr. Richard Foster, Guilford Technical Community College, Jamestown, NC.
- Figure 17-50. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-51. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.
- Figure 17-52. Dr. Don Rolfs, Periodontal Foundations, Wenatchee, WA.

Directions For Completing The Fictitious Patient Cases

- 1. Compile and analyze findings.** Follow the Peak Procedures outlined in Modules 4–16 to assess the patient findings.
- 2. Create a summary statement.** Use notebook paper to create a summary worksheet for each patient. List the significant findings for each assessment category and explain how each finding will impact the dental hygiene care plan.
- 3. Complete the communication role-play in Section 7 of this module.** Clearly and accurately communicate assessment findings to each patient. Present assessment findings to your clinical instructor and discuss the implications of these findings for patient care.

Note: The clinical photographs and radiographs in this module are for illustrative purposes but are not necessarily from the same individual. The components of a fictitious patient case were selected to enhance the learning experiences associated with the case.

SECTION 1 PATIENT F

 American Dental Association www.ada.org	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Medical Alert:</td> <td style="width: 20%;">Condition:</td> <td style="width: 20%;">Premedication:</td> <td style="width: 20%;">Allergies:</td> <td style="width: 20%;">Anesthesia:</td> <td style="width: 20%;">Date:</td> </tr> </table>	Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:
Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:		

HEALTH HISTORY FORM

Name: **FAIRHALL FRASIER F** Home Phone: **(828) 555-1234** Business Phone: ()
 Address: **2222 LINGBERG COURT** City: **ASHEVILLE** State: **NC** Zip Code: **28561**
P.O. BOX or Mailing Address
 Occupation: **NEWSPAPER JOURNALIST** Height: **5'8"** Weight: **164 LBS** Date of Birth: **57 YRS** Sex: ☒ M ☐ F
 SS#: **112-00-1111** Emergency Contact: **GEORGE TAAPKEN** Relationship: **BOSS** Phone: **(828) 555-1236**

If you are completing this form for another person, what is your relationship to that person?

NAME	RELATIONSHIP
------	--------------

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Do your gums bleed when you brush?</th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> <th style="text-align: center;">Don't Know</th> </tr> <tr> <td>Have you ever had orthodontic (braces) treatment?</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Are your teeth sensitive to cold, hot, sweets or pressure?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Do you have earaches or neck pains?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Have you had any periodontal (gum) treatments?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Do you wear removable dental appliances?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Have you had a serious/difficult problem associated with any previous dental treatment?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> </table> If yes, explain:	Do your gums bleed when you brush?	Yes	No	Don't Know	Have you ever had orthodontic (braces) treatment?	☒	☐	☐	Are your teeth sensitive to cold, hot, sweets or pressure?	☐	☒	☐	Do you have earaches or neck pains?	☐	☒	☐	Have you had any periodontal (gum) treatments?	☐	☒	☐	Do you wear removable dental appliances?	☐	☒	☐	Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐	How would you describe your current dental problem? GUMS BLEED Date of your last dental exam: 5 YEARS Date of last dental x-rays: DON'T KNOW What was done at that time? FIX BROKEN FILLING How do you feel about the appearance of your teeth? OK
Do your gums bleed when you brush?	Yes	No	Don't Know																										
Have you ever had orthodontic (braces) treatment?	☒	☐	☐																										
Are your teeth sensitive to cold, hot, sweets or pressure?	☐	☒	☐																										
Do you have earaches or neck pains?	☐	☒	☐																										
Have you had any periodontal (gum) treatments?	☐	☒	☐																										
Do you wear removable dental appliances?	☐	☒	☐																										
Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐																										

MEDICAL INFORMATION

If you answer yes to any of the 3 items below, please stop and return this form to the receptionist. Have you had any of the following diseases or problems? <table border="0" style="width: 100%;"> <tr> <td>Active Tuberculosis</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Persistent cough greater than a 3 week duration</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Cough that produces blood</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> </table> Are you in good health? ☒ Yes ☐ No ☐ Don't Know Has there been any change in your general health within the past year? ☐ Yes ☒ No ☐ Don't Know Are you now under the care of a physician? ☐ Yes ☒ No ☐ Don't Know If yes, what is/are the condition(s) being treated? Date of last physical examination: 10 YEARS AGO Physician: NONE <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">NAME</td> <td>PHONE</td> </tr> <tr> <td>ADDRESS</td> <td>CITY/STATE ZIP</td> </tr> <tr> <td>NAME</td> <td>PHONE</td> </tr> <tr> <td>ADDRESS</td> <td>CITY/STATE ZIP</td> </tr> </table> Have you had any serious illness, operation, or been hospitalized in the past 5 years? ☒ Yes ☐ No ☐ Don't Know If yes, what was the illness or problem? HEPATITIS 2 YEARS AGO	Active Tuberculosis	☐	☒	☐	Persistent cough greater than a 3 week duration	☐	☒	☐	Cough that produces blood	☐	☒	☐	NAME	PHONE	ADDRESS	CITY/STATE ZIP	NAME	PHONE	ADDRESS	CITY/STATE ZIP	Are you taking or have you recently taken any medicine(s) including non-prescription medicine? ☒ Yes ☐ No ☐ Don't Know If yes, what medicine(s) are you taking? SEE LIST Prescribed: Over the counter: Vitamins, natural or herbal preparations and/or diet supplements: Are you taking, or have you taken, any diet drugs such as Pondimin (fenfluramine), Redux (dexphenfluramine) or phen-fen (fenfluramine-phentermine combination)? ☐ Yes ☒ No ☐ Don't Know Do you drink alcoholic beverages? ☒ Yes ☐ No ☐ Don't Know If yes, how much alcohol did you drink in the last 24 hours? 4 COCKTAILS In the past week? 4 COCKTAILS A DAY Are you alcohol and/or drug dependent? ☐ Yes ☒ No ☐ Don't Know If yes, have you received treatment? (circle one) Yes/ No Do you use drugs or other substances for recreational purposes? ☒ Yes ☐ No ☐ Don't Know If yes, please list: Frequency of use (daily, weekly, etc.): Number of years of recreational drug use: Do you use tobacco (smoking, snuff, chew)? ☒ Yes ☐ No ☐ Don't Know If yes, how interested are you in stopping? (circle one) Very / Somewhat / Not interested Do you wear contact lenses? ☒ Yes ☐ No ☐ Don't Know
Active Tuberculosis	☐	☒	☐																		
Persistent cough greater than a 3 week duration	☐	☒	☐																		
Cough that produces blood	☐	☒	☐																		
NAME	PHONE																				
ADDRESS	CITY/STATE ZIP																				
NAME	PHONE																				
ADDRESS	CITY/STATE ZIP																				

PLEASE COMPLETE BOTH SIDES

Figure 17-1A. Page 1 of medical history for fictitious patient F.

Are you allergic to or have you had a reaction to? <table border="0"> <tr> <td>Local anesthetics</td> <td>☐ Yes</td> <td>☐ No</td> <td>☒ Don't Know</td> </tr> <tr> <td>Aspirin</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Penicillin or other antibiotics</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Barbiturates, sedatives, or sleeping pills</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Sulfa drugs</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Codeine or other narcotics</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Latex</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Iodine</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Hay fever/seasonal</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Animals</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Food (specify) _____</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Other (specify) _____</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Metals (specify) _____</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> </table> To yes responses, specify type of reaction. <u>RAGWEED AND CATS</u>	Local anesthetics	☐ Yes	☐ No	☒ Don't Know	Aspirin	☐	☒	☐	Penicillin or other antibiotics	☐	☒	☐	Barbiturates, sedatives, or sleeping pills	☐	☒	☐	Sulfa drugs	☐	☒	☐	Codeine or other narcotics	☐	☒	☐	Latex	☐	☒	☐	Iodine	☒	☐	☐	Hay fever/seasonal	☒	☐	☐	Animals	☐	☒	☐	Food (specify) _____	☐	☒	☐	Other (specify) _____	☐	☒	☐	Metals (specify) _____	☐	☒	☐	Have you had an orthopedic total joint (hip, knee, elbow, finger) replacement? ☐ Yes ☒ No ☐ Don't Know If yes, when was this operation done? _____ If you answered yes to the above question, have you had any complications or difficulties with your prosthetic joint? _____ Has a physician or previous dentist recommended that you take antibiotics prior to your dental treatment? ☐ Yes ☒ No ☐ Don't Know If yes, what antibiotic and dose? _____ Name of physician or dentist*: _____ Phone: _____
Local anesthetics	☐ Yes	☐ No	☒ Don't Know																																																		
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Metals (specify) _____	☐	☒	☐																																																		

WOMEN ONLY	
Are you or could you be pregnant?	☐ Yes ☐ No ☐ Don't Know
Nursing?	☐ Yes ☐ No ☐ Don't Know
Taking birth control pills or hormonal replacement?	☐ Yes ☐ No ☐ Don't Know

Please (X) a response to indicate if you have or have not had any of the following diseases or problems.

<table border="0"> <tr> <td>Abnormal bleeding</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>AIDS or HIV infection</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Anemia</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Arthritis</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Rheumatoid arthritis</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Asthma</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Blood transfusion. If yes, date: _____</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Cancer/Chemotherapy/Radiation Treatment</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Cardiovascular disease. If yes, specify below:</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td> _____ Angina</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Arteriosclerosis</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Artificial heart valves</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Congenital heart defects</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Congestive heart failure</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Coronary artery disease</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Damaged heart valves</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Heart attack</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Heart murmur</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ High blood pressure</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Low blood pressure</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Mitral valve prolapse</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Pacemaker</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Rheumatic heart disease/Rheumatic fever</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Chest pain upon exertion</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Chronic pain</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Disease, drug, or radiation-induced immunosuppression</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Diabetes. If yes, specify below:</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td> _____ Type I (Insulin dependent)</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Type II</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dry Mouth</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Eating disorder. If yes, specify: _____</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Epilepsy</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Fainting spells or seizures</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Gastrointestinal disease</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>G.E. Reflux/persistent heartburn</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Glaucoma</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> </table>	Abnormal bleeding	☐ Yes	☒ No	☐ Don't Know	AIDS or HIV infection	☐	☒	☐	Anemia	☐	☒	☐	Arthritis	☐	☒	☐	Rheumatoid arthritis	☐	☒	☐	Asthma	☐	☒	☐	Blood transfusion. If yes, date: _____	☐	☒	☐	Cancer/Chemotherapy/Radiation Treatment	☐	☒	☐	Cardiovascular disease. If yes, specify below:	☐	☒	☐	_____ Angina				_____ Arteriosclerosis				_____ Artificial heart valves				_____ Congenital heart defects				_____ Congestive heart failure				_____ Coronary artery disease				_____ Damaged heart valves				_____ Heart attack				_____ Heart murmur				_____ High blood pressure				_____ Low blood pressure				_____ Mitral valve prolapse				_____ Pacemaker				_____ Rheumatic heart disease/Rheumatic fever				Chest pain upon exertion	☐	☒	☐	Chronic pain	☐	☒	☐	Disease, drug, or radiation-induced immunosuppression	☐	☒	☐	Diabetes. If yes, specify below:	☐	☒	☐	_____ Type I (Insulin dependent)				_____ Type II				Dry Mouth	☒	☐	☐	Eating disorder. If yes, specify: _____	☐	☒	☐	Epilepsy	☐	☒	☐	Fainting spells or seizures	☐	☒	☐	Gastrointestinal disease	☐	☒	☐	G.E. 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If yes, specify below:</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td> _____ Emphysema</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Bronchitis, etc.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Severe headaches/migraines</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Severe or rapid weight loss</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Sexually transmitted disease</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Sinus trouble</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Sleep disorder <u>HAVE TROUBLE SLEEPING</u></td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Sores or ulcers in the mouth</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Stroke</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Systemic lupus erythematosus</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Tuberculosis</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Thyroid problems</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Ulcers</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Excessive urination</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Do you have any disease, condition, or problem not listed above that you think I should know about?</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Please explain: _____</td> <td></td> <td></td> <td></td> </tr> </table>	Hemophilia	☐ Yes	☒ No	☐ Don't Know	Hepatitis, jaundice or liver disease	☒	☐	☐	Recurrent Infections	☐	☒	☐	If yes, indicate type of infection: _____				Kidney problems	☐	☒	☐	Mental health disorders. If yes, specify: _____	☐	☒	☐	Malnutrition	☐	☒	☐	Night sweats	☐	☒	☐	Neurological disorders. If yes, specify: _____	☐	☒	☐	Osteoporosis	☐	☒	☐	Persistent swollen glands in neck	☐	☒	☐	Respiratory problems. If yes, specify below:	☐	☒	☐	_____ Emphysema				_____ Bronchitis, etc.				Severe headaches/migraines	☐	☒	☐	Severe or rapid weight loss	☐	☒	☐	Sexually transmitted disease	☐	☒	☐	Sinus trouble	☐	☒	☐	Sleep disorder <u>HAVE TROUBLE SLEEPING</u>	☒	☐	☐	Sores or ulcers in the mouth	☐	☒	☐	Stroke	☐	☒	☐	Systemic lupus erythematosus	☐	☒	☐	Tuberculosis	☐	☒	☐	Thyroid problems	☐	☒	☐	Ulcers	☐	☒	☐	Excessive urination	☐	☒	☐	Do you have any disease, condition, or problem not listed above that you think I should know about?	☐	☒	☐	Please explain: _____			
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NOTE: Both Doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

Fraser Fairhall 2/05/XX

SIGNATURE OF PATIENT/LEGAL GUARDIAN DATE

FOR COMPLETION BY DENTIST							
Comments on patient interview concerning health history:							
Significant findings from questionnaire or oral interview:							
Dental management considerations:							
Health History Update: On a regular basis the patient should be questioned about any medical history changes, date and comments notated, along with signature. <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Date</td> <td style="width: 40%;">Comments</td> <td style="width: 30%;">Signature of patient and dentist</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		Date	Comments	Signature of patient and dentist			
Date	Comments	Signature of patient and dentist					

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Figure 17-1B. Page 2 of medical history for fictitious patient F.

Medication List	
Patient	FRASIER FAIRHALL
Date	2/05/XX
PRESCRIBED	
NONE	
OVER-THE-COUNTER	
NYTOL SLEEPING PILL - ONE EACH NIGHT	
VITAMINS, HERBS, DIET SUPPLEMENTS	
NONE	

Figure 17-2. Medication list for fictitious patient F.

Smoking History

Patient FRASIER FAIRHALL Date 2/05/XX

1. At what age did you begin to smoke? 13
2. How many cigarettes do you smoke per day now? 3 PACKS
Per day at your heaviest? 3 PACKS
3. How many times have you tried to stop smoking? 5
☐ Never tried to stop
4. What is the longest period of time you have gone without smoking? 5 DAYS
5. What forms of tobacco are you currently using? *(Please check all that apply.)*

☒ Cigarettes	☐ Chewing tobacco
☐ Pipes	☐ Snuff
☐ Cigars	☐ Other
6. Do your ☐ family members, ☒ friends, ☒ co-workers smoke? *(Please check all that apply. Circle if you live with any of these smokers.)*
7. What smoking cessation methods have you tried? *(Please check all that apply.)*

☐ None	☐ Self-help programs
☒ Cold turkey	☐ Gradual reduction
☐ Hypnosis	☐ Laser
☐ Acupuncture	☒ Other <u>NICOTINE GUM</u>
8. Are you being ☒ encouraged, or ☐ discouraged to stop smoking by any of the following? *(Please check all that apply.)*

☐ Spouse or significant other	☐ Friend
☒ Child	☐ Co-worker
☐ Other family member	
9. Who do you turn to for support? *(Please check all that apply.)*

☒ Spouse or significant other	☐ Counselor
☐ Parent	☐ Health care provider
☐ Sibling	☐ Friend
☒ Other family member	☐ Co-worker
☐ Clergy/rabbi/priest	

Please rank the following on a scale of 1 (strongly disagree) to 5 (strongly agree):

I am ready to stop smoking at this time:	1 <u>2</u> 3 4 5
I am concerned about weight gain:	<u>1</u> 2 3 4 5
I am concerned about dealing with stress:	1 2 3 4 <u>5</u>

Frasier Fairhall

Patient Signature

Ester Hanheim, DH2

Reviewed by

Figure 17-3.

Vital Signs	
Name <u>FRASIER FAIRHALL</u>	Date <u>2/05/XX</u>
Temperature <u>98.2° F</u>	Pulse <u>80</u>
Respiratory Rate <u>20</u>	Blood Pressure <u>158/100</u>
Tobacco Use: ☐ Never ☐ Former	
☒ Cigarettes <u>3</u> packs/day ☐ Pipe ☐ Smokeless tobacco	

Figure 17-4. Vital signs findings for fictitious patient F.

Finding:

Location: behind ear

Size: 2 cm in diameter

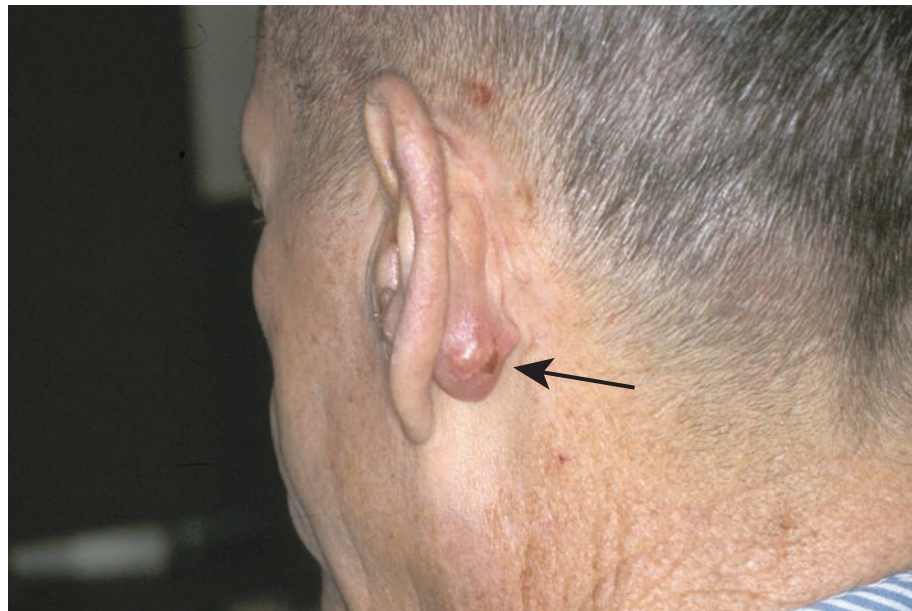


Figure 17-5 for fictitious patient F.

**Finding:**

Location: tongue

Size: 5 cm in anterior—
posterior length

2.5 cm in superior—
inferior width

Figure 17-6 for fictitious patient F.



Figure 17-7 for fictitious patient F.

Area 1: Mandibular anterior sextant, facial aspect.



Figure 17-8 for fictitious patient F.

Area 2: Mandibular left posterior sextant, lingual aspect.

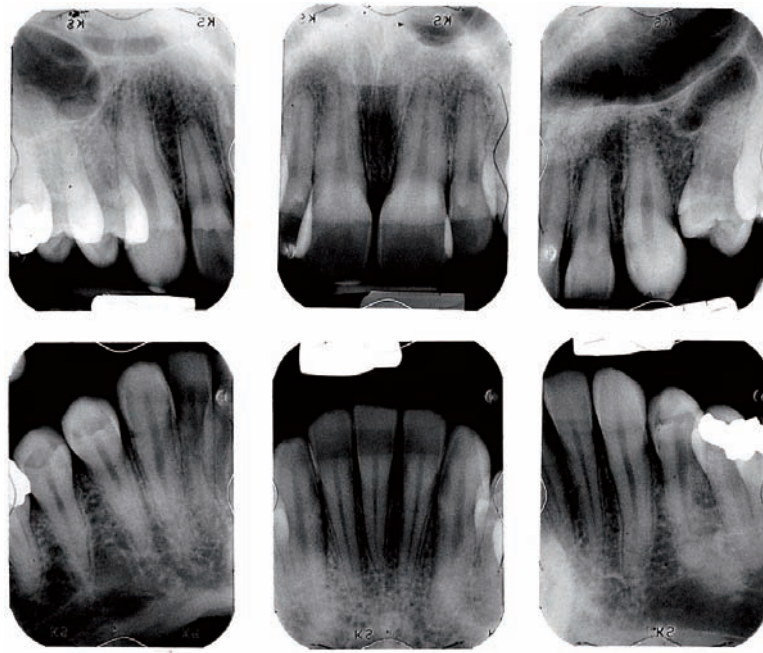


Figure 17-9A

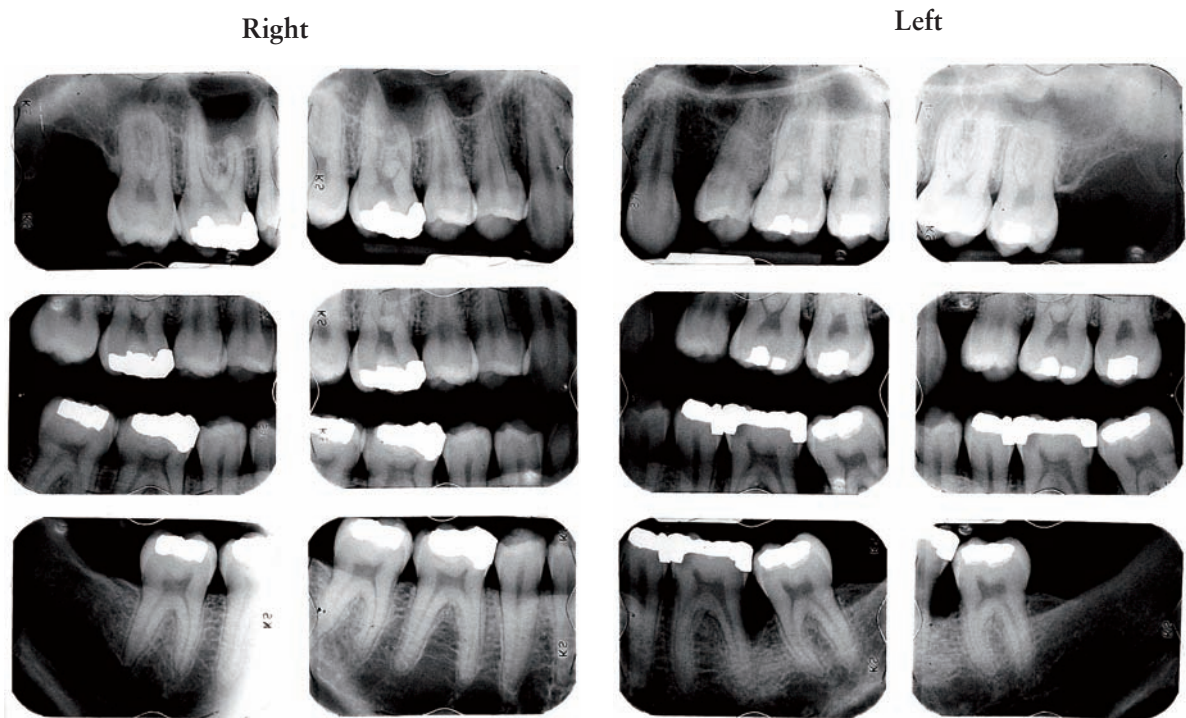


Figure 17-9B

Figure 17-9C

Figure 17-9A–C. Radiographs for fictitious patient F.

SECTION 2 PATIENT G

ADA American Dental Association www.ada.org	Alerta Médica: _____ Condición: _____ Premedicación: _____ Alergias: _____ Anestesia: _____ Fecha: _____
--	---

FORMULARIO DE HISTORIA MÉDICA

Nombre: **DE LA GARZA, GUMERSINDO** Tel. Res.: **(828) 555-4321** Tel. Trabajo: ()
 Dirección: **11 MELBURN AVE.** Ciudad: **ASHEVILLE** Estado: **NC** Zona postal: **28801**
 Ocupación: **EXCHANGE STUDENT** Estatura: **5'4"** Peso: **130 LBS** Fecha de Nacimiento: **16 YRS** Sexo: M ☒ F ☐
 SS#: **---** Contacto en Emergencias: **JUNE RICARD** Relación: **FOSTER PARENT** Tel.: **(828) 555-4321**

Si está llenando este formulario por otra persona, ¿cuál es su relación con ésta? **JUNE RICARD - GUMERSINDO IS AN EXCHANGE STUDENT FROM MADRID, SPAIN WHO IS LIVING WITH US FOR 6 MONTHS**

En las preguntas siguientes marque con (X) lo que se aplique. Sus respuestas son sólo para nuestros expedientes y se mantendrán en confidencia de acuerdo con las leyes pertinentes. Favor de tener en cuenta que durante su primera visita se le harán más preguntas acerca de sus respuestas en este cuestionario y podrán hacerse preguntas adicionales acerca de su salud. Esta información es vital para poder proveerle el cuidado apropiado. Esta oficina no usa esta información para discriminar. **GUMERSINDO FILLED OUT MOST OF THIS INFORMATION HIMSELF. I HELPED HIM WITH OUR ADDRESS, PHONE NUMBER, AND SOME QUESTIONS.**

INFORMACIÓN DENTAL

¿Le sangran las encías al cepillarse? ☒ Sí ☐ No ☐ No sé ¿Ha recibido tratamiento de ortodoncia (frenos en los dientes)? ☐ Sí ☒ No ☐ No sé ¿Tiene los dientes sensitivos al frío, calor, dulce o presión? ☐ Sí ☒ No ☐ No sé ¿Tiene dolores de oído o de cuello? ☐ Sí ☒ No ☐ No sé ¿Ha recibido tratamiento periodontal (de las encías)? ☐ Sí ☒ No ☐ No sé ¿Usa aparatos (prótesis) dentales removibles? ☐ Sí ☒ No ☐ No sé ¿Ha tenido alguna dificultad seria asociada con cualquier tratamiento dental anteriormente? ☐ Sí ☒ No ☐ No sé Si es así, explique: _____	¿Cómo describiría el problema dental que tiene ahora? CHECK-UP Fecha de su último examen dental: 1 YEAR AGO Fecha de los últimos rayos X dentales: 1 YEAR AGO ¿Qué le hicieron esa vez? CHECK-UP ¿Qué piensa acerca de la apariencia de sus dientes? OK
--	---

INFORMACIÓN MÉDICA

Si contesta que sí a cualquiera de las 3 siguientes, deténgase y lleve este formulario a la recepcionista. ¿Ha tenido alguna de las siguientes enfermedades o problemas? Tuberculosis activa ☐ Sí ☒ No ☐ No sé Tos persistente por más de tres semanas. ☐ Sí ☒ No ☐ No sé Tos que produce sangre ☐ Sí ☒ No ☐ No sé ¿Se encuentra en buena salud? ☒ Sí ☐ No ☐ No sé ¿Ha habido algún cambio en su salud general durante el pasado año? ☐ Sí ☒ No ☐ No sé ¿Está al presente bajo el cuidado de un médico? ☒ Sí ☐ No ☐ No sé Si es así, ¿qué condición(es) se está tratando? TYPE 1 DIABETES Fecha del último examen médico: 4 MONTHS AGO Médico(s): DR. PAUL RODRIGUEZ 555-3412 NOMBRE: 22 MARKET PLACE TELÉFONO: ASHEVILLE NC 28801 DIRECCIÓN: _____ CIUDAD/ESTADO: _____ ZONA POSTAL: _____ NOMBRE: _____ TELÉFONO: _____ DIRECCIÓN: _____ CIUDAD/ESTADO: _____ ZONA POSTAL: _____ ¿Ha sufrido una enfermedad seria, una operación, o ha sido hospitalizado en los últimos 5 años? ☐ Sí ☒ No ☐ No sé Si es así, ¿cuál fue la enfermedad o el problema? _____ _____ _____	¿Está tomando o ha tomado recientemente alguna medicina incluyendo medicinas sin receta? ☒ Sí ☐ No ☐ No sé Si es así, ¿qué medicinas está tomando? De receta: SEE LIST Sin receta: _____ Vitaminas, preparaciones naturales o hierbas medicinales, suplementos dietéticos: _____ ¿Está tomando o ha tomado alguna medicina para rebajar de peso como Pondimin (fenfluramina), Redux (dexfenfluramina) o fen-fen (fenfluramina-fentermina)? ☐ Sí ☒ No ☐ No sé ¿Toma bebidas alcohólicas? ☐ Sí ☒ No ☐ No sé Si es así, ¿cuánto alcohol tomó en la últimas 24 horas? ¿En la última semana? ¿Tiene dependencia del alcohol o de las drogas? ☐ Sí ☒ No ☐ No sé Si es así, ¿ha recibido tratamiento? (Marque una.) Sí / No ¿Usa drogas u otra sustancia con fines recreativos? ☐ Sí ☒ No ☐ No sé Si es así, enumere: Frecuencia de uso (diario, semanal, etc.): # de años de uso recreativo de drogas: ¿Usa tabaco (fuma, rapé, masca)? ☐ Sí ☒ No ☐ No sé Si es así, ¿cuán interesado está en cesar? (marque uno) Muy interesado / Algo / No tengo interés ¿Usa lentes de contacto? ☐ Sí ☒ No ☐ No sé
--	--

FAVOR DE CONTESTAR AMBOS LADOS

Figure 17-10A. Page 1 of the medical history for fictitious patient G.

Medication List

Patient GUMERCINDO DE LA GARZA Date 2/05/XX

PREScribed
<u>HUMULIN N INSULIN INJECTION SC B.I.D.</u>

OVER-THE-COUNTER
NONE
VITAMINS, HERBS, DIET SUPPLEMENTS

Figure 17-11. Medication list for fictitious patient G.

Vital Signs	
Name <u>GUMERCINDO DE LA GARZA</u>	Date <u>2/05/XX</u>
Temperature <u>96.8°F</u>	Pulse <u>60</u>
Respiratory Rate <u>16</u>	Blood Pressure <u>110/70</u>
Tobacco Use: ☒ Never ☐ Former	
☐ Cigarettes___ packs/day ☐ Pipe ☐ Smokeless tobacco	

Figure 17-12. Vital signs findings for fictitious patient G.



Finding:

Location: cheek, anterior to left ear

Size: 3 cm in diameter

Figure 17-13 for fictitious patient G.

Finding:

Location: labial mucosa,
lower lip

Size: 5 mm in diameter

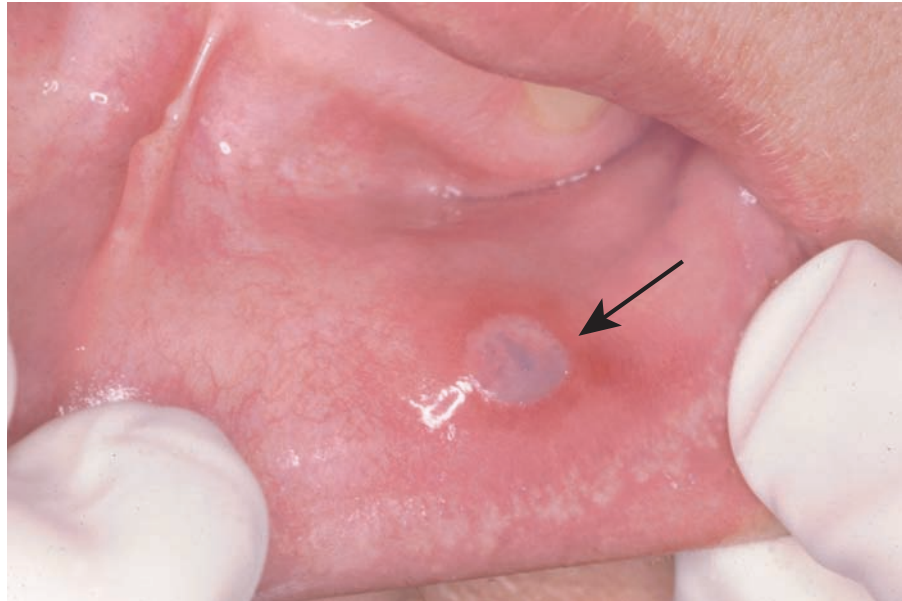


Figure 17-14 for fictitious patient G.

Finding:

Location: ventral sur-
face of tongue

Size: 2.5 cm in
anterior-posterior
length

1.5 cm in width

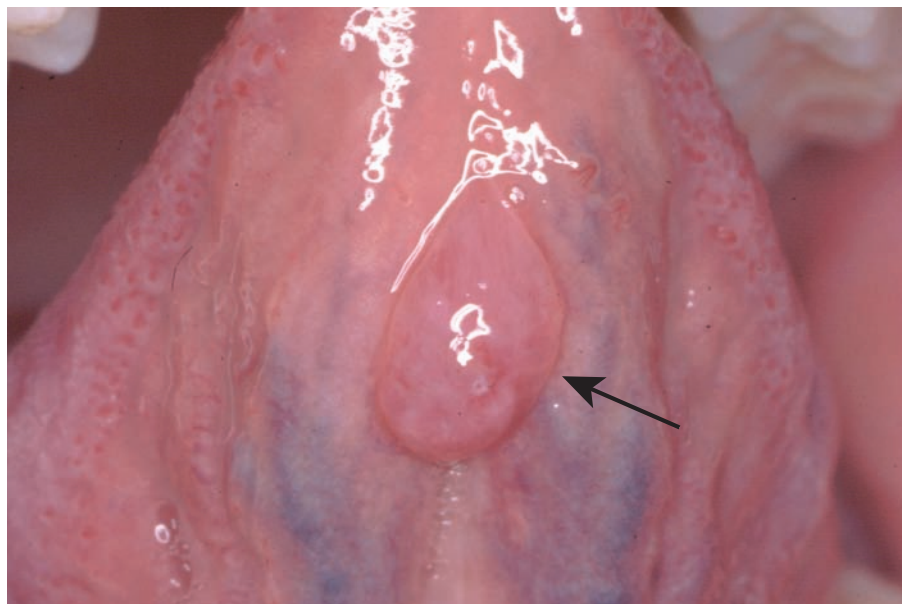


Figure 17-15 for fictitious patient G.



Figure 17-16 for fictitious patient G.

Area 1: Maxillary anterior sextant, facial aspect.

Area 2: Mandibular anterior sextant, facial aspect.



Figure 17-17 for fictitious patient G.

Area 3: maxillary left posterior sextant, lingual aspect.

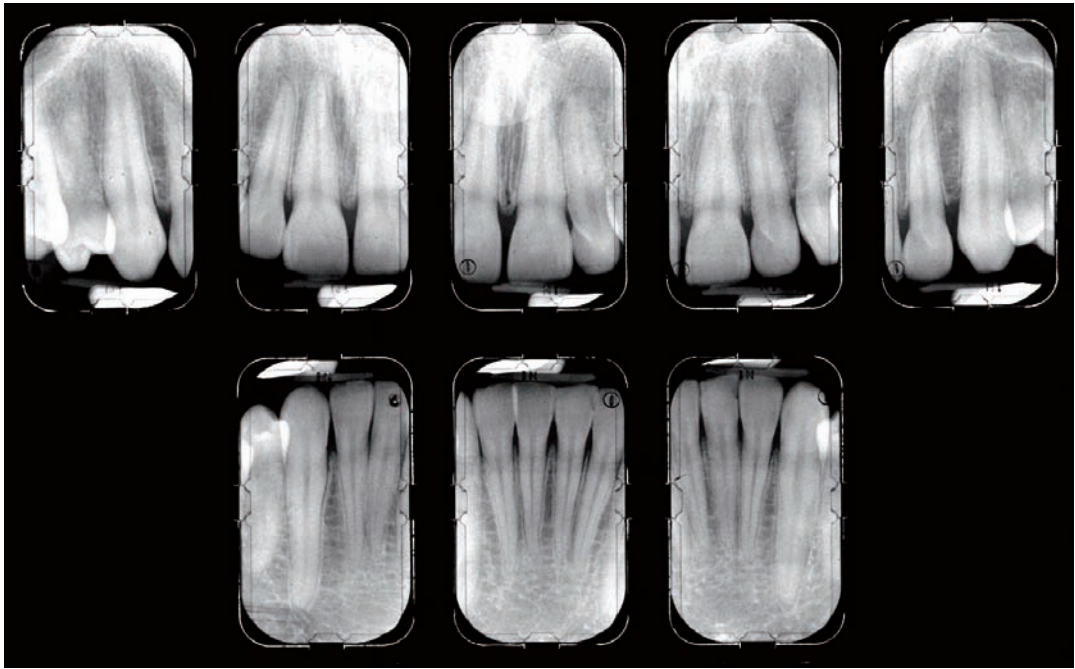


Figure 17-18A

Right

Left



Figure 17-18B



Figure 17-18C

Figure 17-18A–C. Radiographs for fictitious patient G.

SECTION 3 PATIENT H

ADA American Dental Association www.ada.org	Medical Alert: _____ Condition: _____ Premedication: _____ Allergies: _____ Anesthesia: _____ Date: _____
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HEALTH HISTORY FORM

Name: **HAVERSMITH, HARRY H.** Home Phone: **(828) 555-2345** Business Phone: **(828) 555-5432**
 Address: LAST FIRST MIDDLE **2144 WELLS AVE** City: **HENDERSONVILLE** State: **NC** Zip Code: **28774**
P.O. BOX or Mailing Address
 Occupation: **AIR TRAFFIC CONTROLLER** Height: **6'3"** Weight: **182 LBS** Date of Birth: **32 YRS** Sex: ☒ M ☐ F ☐
 SS#: **444-44-4444** Emergency Contact: **MARY HAVERSMITH** Relationship: **WIFE** Phone: **(828) 555-2345**

If you are completing this form for another person, what is your relationship to that person?

NAME	RELATIONSHIP

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

<table border="0" style="width: 100%;"> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">Yes</th> <th style="width: 10%; text-align: center;">No</th> <th style="width: 10%; text-align: center;">Don't Know</th> </tr> <tr> <td>Do your gums bleed when you brush?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> </tr> <tr> <td>Have you ever had orthodontic (braces) treatment?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Are your teeth sensitive to cold, hot, sweets or pressure?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Do you have earaches or neck pains?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Have you had any periodontal (gum) treatments?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Do you wear removable dental appliances?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Have you had a serious/difficult problem associated with any previous dental treatment?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> </table> If yes, explain: _____		Yes	No	Don't Know	Do your gums bleed when you brush?	☐	☐	☒	Have you ever had orthodontic (braces) treatment?	☐	☒	☐	Are your teeth sensitive to cold, hot, sweets or pressure?	☐	☒	☐	Do you have earaches or neck pains?	☐	☒	☐	Have you had any periodontal (gum) treatments?	☐	☒	☐	Do you wear removable dental appliances?	☐	☒	☐	Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐	How would you describe your current dental problem? CHECK-UP Date of your last dental exam: 2 YEARS AGO Date of last dental x-rays: DON'T KNOW What was done at that time? FILLING How do you feel about the appearance of your teeth? FINE
	Yes	No	Don't Know																														
Do your gums bleed when you brush?	☐	☐	☒																														
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MEDICAL INFORMATION

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M.G. FORRESTER 555-4523</td> </tr> <tr> <td>NAME</td> <td>PHONE</td> <td colspan="2"> </td> </tr> <tr> <td>25 BROAD ST. HENDERSONVILLE 28745</td> <td>28745</td> <td colspan="2"> </td> </tr> <tr> <td>ADDRESS</td> <td>CITY/STATE</td> <td>ZIP</td> <td> </td> </tr> <tr> <td>DR. PERRY SMITH (CARDIOLOGIST) 555-4325</td> <td colspan="3"> </td> </tr> <tr> <td>NAME</td> <td>PHONE</td> <td colspan="2"> </td> </tr> <tr> <td>71 PLUM ST. 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(circle one) Yes / No</td> <td colspan="3"> </td> </tr> <tr> <td>Do you use drugs or other substances for recreational purposes?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>If yes, please list:</td> <td colspan="3"> </td> </tr> <tr> <td>Frequency of use (daily, weekly, etc.):</td> <td colspan="3"> </td> </tr> <tr> <td>Number of years of recreational drug use:</td> <td colspan="3"> </td> </tr> <tr> <td colspan="4"> </td> </tr> <tr> <td>Do you use tobacco (smoking, snuff, chew)?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>If yes, how interested are you in stopping?</td> <td colspan="3"> </td> </tr> <tr> <td>(circle one) Very / Somewhat / Not interested</td> <td colspan="3"> </td> </tr> <tr> <td>Do you wear contact lenses?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> </table>		Yes	No	Don't Know	Are you taking or have you recently taken any medicine(s) including non-prescription medicine?	☒	☐	☐	If yes, what medicine(s) are you taking?	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If yes, what is/are the condition(s) being treated?	REGULAR CARE																																																																																																																																																																																								
Date of last physical examination: 3 MONTHS AGO																																																																																																																																																																																									
Physician: DR. M.G. FORRESTER 555-4523																																																																																																																																																																																									
NAME	PHONE																																																																																																																																																																																								
25 BROAD ST. HENDERSONVILLE 28745	28745																																																																																																																																																																																								
ADDRESS	CITY/STATE	ZIP																																																																																																																																																																																							
DR. PERRY SMITH (CARDIOLOGIST) 555-4325																																																																																																																																																																																									
NAME	PHONE																																																																																																																																																																																								
71 PLUM ST. HENDERSONVILLE 28745	28745																																																																																																																																																																																								
ADDRESS	CITY/STATE	ZIP																																																																																																																																																																																							
Have you had any serious illness, operation, or been hospitalized in the past 5 years?																																																																																																																																																																																									
	☒	☐	☐																																																																																																																																																																																						
If yes, what was the illness or problem?	CHEST PAINS																																																																																																																																																																																								
	Yes	No	Don't Know																																																																																																																																																																																						
Are you taking or have you recently taken any medicine(s) including non-prescription medicine?	☒	☐	☐																																																																																																																																																																																						
If yes, what medicine(s) are you taking?	SEE LIST																																																																																																																																																																																								
Prescribed:																																																																																																																																																																																									
Over the counter:																																																																																																																																																																																									
Vitamins, natural or herbal preparations and/or diet supplements:																																																																																																																																																																																									
Are you taking, or have you taken, any diet drugs such as Pondimin (fenfluramine), Redux (dexphenfluramine) or phen-fen (fenfluramine-phenentermine combination)?	☐	☒	☐																																																																																																																																																																																						
Do you drink alcoholic beverages?	☒	☐	☐																																																																																																																																																																																						
If yes, how much alcohol did you drink in the last 24 hours?	ONE GLASS WINE																																																																																																																																																																																								
In the past week?	3 GLASSES WINE																																																																																																																																																																																								
Are you alcohol and/or drug dependent?	☐	☒	☐																																																																																																																																																																																						
If yes, have you received treatment? (circle one) Yes / No																																																																																																																																																																																									
Do you use drugs or other substances for recreational purposes?	☐	☒	☐																																																																																																																																																																																						
If yes, please list:																																																																																																																																																																																									
Frequency of use (daily, weekly, etc.):																																																																																																																																																																																									
Number of years of recreational drug use:																																																																																																																																																																																									
Do you use tobacco (smoking, snuff, chew)?	☐	☒	☐																																																																																																																																																																																						
If yes, how interested are you in stopping?																																																																																																																																																																																									
(circle one) Very / Somewhat / Not interested																																																																																																																																																																																									
Do you wear contact lenses?	☐	☒	☐																																																																																																																																																																																						

PLEASE COMPLETE BOTH SIDES

Figure 17-19A. Page 1 of the medical history for fictitious patient H.

Are you allergic to or have you had a reaction to? Local anesthetics ☐ ☒ ☐ <u>Aspirin</u> ☒ ☒ ☐ Penicillin or other antibiotics ☒ ☒ ☐ Barbiturates, sedatives, or sleeping pills ☐ ☐ ☒ Sulfa drugs ☐ ☒ ☐ Codeine or other narcotics ☐ ☒ ☐ Latex ☐ ☒ ☐ Iodine ☐ ☒ ☐ Hay fever/seasonal ☐ ☒ ☐ Animals ☐ ☒ ☐ Food (specify) _____ ☐ ☒ ☐ Other (specify) _____ ☐ ☒ ☐ Metals (specify) _____ ☐ ☒ ☐ To yes responses, specify type of reaction. <u>ALLERGIC TO PENICILLIN- HIVES,</u> <u>DIFFICULTY IN BREATHING</u>	Yes No Don't Know	Have you had an orthopedic total joint (hip, knee, elbow, finger) replacement? ☐ ☒ ☐ If yes, when was this operation done? _____ If you answered yes to the above question, have you had any complications or difficulties with your prosthetic joint? _____ Has a physician or previous dentist recommended that you take antibiotics prior to your dental treatment? ☐ ☒ ☐ If yes, what antibiotic and dose? _____ Name of physician or dentist*: _____ Phone: _____	Yes No Don't Know
---	---------------------------------	---	---------------------------------

WOMEN ONLY

Are you or could you be pregnant?	☐	☐	☐
Nursing?	☐	☐	☐
Taking birth control pills or hormonal replacement?	☐	☐	☐

Please (X) a response to indicate if you have or have not had any of the following diseases or problems.

Abnormal bleeding ☐ ☒ ☐ AIDS or HIV infection ☐ ☒ ☐ Anemia ☐ ☒ ☐ Arthritis ☐ ☒ ☐ Rheumatoid arthritis ☐ ☒ ☐ Asthma ☐ ☒ ☐ Blood transfusion. If yes, date: _____ ☒ ☐ ☐ Cancer/Chemotherapy/Radiation Treatment ☐ ☒ ☐ Cardiovascular disease. If yes, specify below: ☒ ☐ ☐ ☒ Angina ☐ Heart murmur ☐ Arteriosclerosis ☒ High blood pressure ☐ Artificial heart valves ☐ Low blood pressure ☒ Congenital heart defects ☐ Mitral valve prolapse ☐ Congestive heart failure ☐ Pacemaker ☐ Coronary artery disease ☐ Rheumatic heart disease/Rheumatic fever ☐ Damaged heart valves ☐ Heart attack Chest pain upon exertion ☒ ☐ ☐ Chronic pain ☐ ☒ ☐ Disease, drug, or radiation-induced immunosuppression ☐ ☒ ☐ Diabetes. If yes, specify below: ☐ ☒ ☐ ☐ Type I (Insulin dependent) ☐ Type II Dry Mouth ☐ ☒ ☐ Eating disorder. If yes, specify: _____ ☐ ☒ ☐ Epilepsy ☐ ☒ ☐ Fainting spells or seizures ☐ ☒ ☐ Gastrointestinal disease ☐ ☒ ☐ G.E. Reflux/persistent heartburn ☐ ☒ ☐ Glaucoma ☐ ☒ ☐	Yes No Don't Know	Hemophilia ☐ ☒ ☐ Hepatitis, jaundice or liver disease ☐ ☒ ☐ Recurrent Infections ☐ ☒ ☐ If yes, indicate type of infection: _____ ☐ ☒ ☐ Kidney problems ☐ ☒ ☐ Mental health disorders. If yes, specify: _____ ☐ ☒ ☐ Malnutrition ☐ ☒ ☐ Night sweats ☐ ☒ ☐ Neurological disorders. If yes, specify: _____ ☐ ☒ ☐ Osteoporosis ☐ ☒ ☐ Persistent swollen glands in neck ☐ ☒ ☐ Respiratory problems. If yes, specify below: ☐ ☒ ☐ ☐ Emphysema ☐ Bronchitis, etc. Severe headaches/migraines ☐ ☒ ☐ Severe or rapid weight loss ☐ ☒ ☐ Sexually transmitted disease ☐ ☒ ☐ Sinus trouble ☐ ☒ ☐ Sleep disorder ☐ ☒ ☐ Sores or ulcers in the mouth ☐ ☒ ☐ Stroke ☐ ☒ ☐ Systemic lupus erythematosus ☐ ☒ ☐ Tuberculosis ☐ ☒ ☐ Thyroid problems ☐ ☒ ☐ Ulcers ☐ ☒ ☐ Excessive urination ☐ ☒ ☐ Do you have any disease, condition, or problem not listed above that you think I should know about? ☐ ☒ ☐ Please explain: _____	Yes No Don't Know
--	---------------------------------	--	---------------------------------

NOTE: Both Doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

Harry H. Haversmith

SIGNATURE OF PATIENT/LEGAL GUARDIAN

2/05/XX

DATE

FOR COMPLETION BY DENTIST

Comments on patient interview concerning health history: _____

Significant findings from questionnaire or oral interview: _____

Dental management considerations: _____

Health History Update: On a regular basis the patient should be questioned about any medical history changes, date and comments notated, along with signature.

Date

Comments

Signature of patient and dentist

Figure 17-19B. Page 2 of the medical history for fictitious patient H.

Medication List	
Patient	<u>HARRY HAVERSMITH</u>
Date	<u>2/05/XX</u>
PRESCRIBED	
<u>NITRO - DUR PATCH</u>	
<u>TENORMIN 25MG/DAY</u>	
<u>VASOTEC 10MG/DAY</u>	
OVER-THE-COUNTER	
<u>COUGH DROPS FOR COUGH</u>	
VITAMINS, HERBS, DIET SUPPLEMENTS	
<u>ONE MULTIVITAMIN/DAY</u>	

Figure 17-20. Medication list for fictitious patient H.

Vital Signs	
Name <u>HARRY HAVERSMITH</u>	Date <u>2/05/XX</u>
Temperature <u>99.6° F</u>	Pulse <u>100</u>
Respiratory Rate <u>20</u>	Blood Pressure <u>130/88</u>
Tobacco Use: ☒ Never ☐ Former	
☐ Cigarettes___ packs/day ☐ Pipe ☐ Smokeless tobacco	

Figure 17-21. Vital signs findings for fictitious patient H.

Finding:

Location: neck, 2.5 cm
inferior to the left ear lobe

Size: 2 mm in superior-
inferior length

1 mm in width

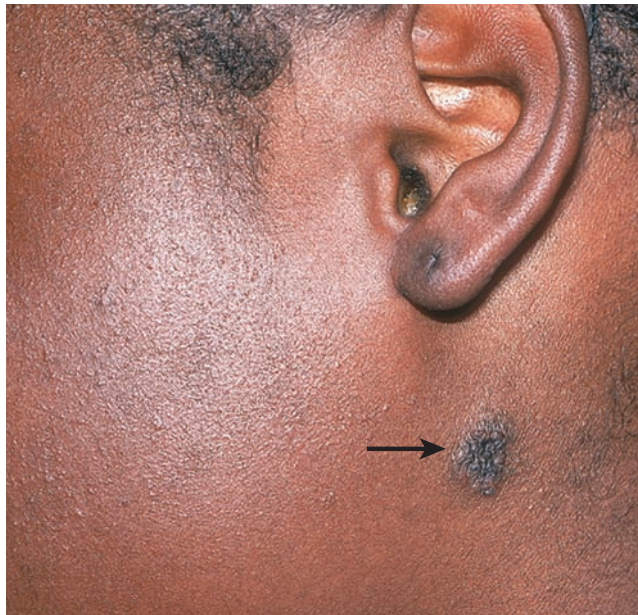


Figure 17-22 for fictitious patient H.

**Finding:**

Location: left buccal mucosa

Size: 7 cm in anterior-posterior length

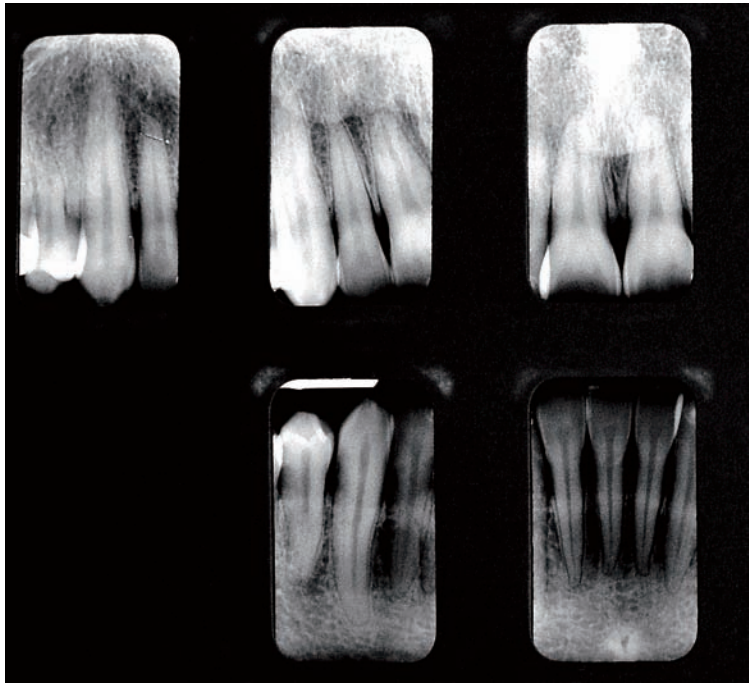
1 cm in width

Figure 17-23 for fictitious patient H.



Figure 17-24 for fictitious patient H.

Area 1: Maxillary anterior sextant, facial aspect.



Right

Figure 17-25A

Left



Figure 17-25B

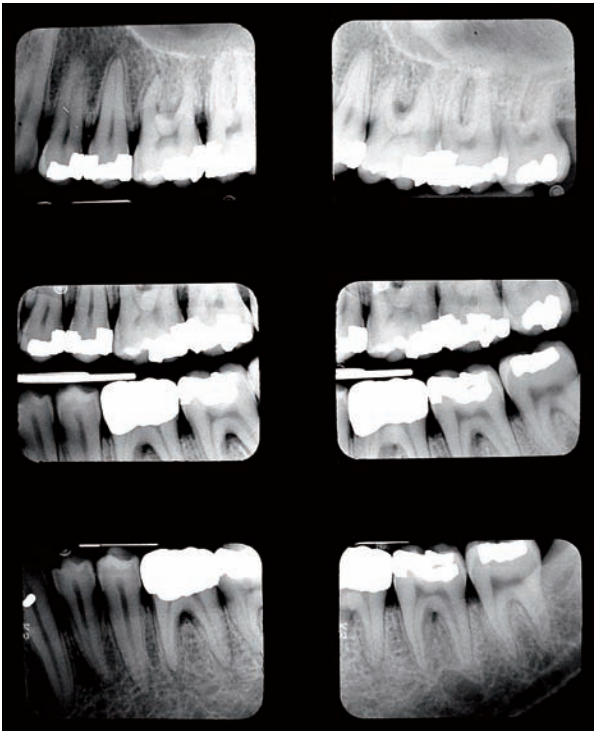


Figure 17-25C

Figure 17-25A–C. Radiographs for fictitious patient H.

SECTION 4 PATIENT I

ADA American Dental Association
www.ada.org

Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:
----------------	------------	----------------	------------	-------------	-------

HEALTH HISTORY FORM

Name: **IANNUZZI IDA I.** Home Phone: **(828) 555-3456** Business Phone: ()

Address: **11 SMOKEY MOUNTAIN TRAIL** City: **MILLS RIVER** State: **NC** Zip Code: **28705**

Occupation: **RETIRED** Height: **5'11"** Weight: **106 LBS** Date of Birth: **82 YRS** Sex: M ☐ F ☒

SS#: **555-00-5555** Emergency Contact: **LILLI LOMAN** Relationship: **DAUGHTER** Phone: **(828) 555-6543**

If you are completing this form for another person, what is your relationship to that person?

NAME	RELATIONSHIP

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

	Yes	No	Don't Know
Do your gums bleed when you brush?	☐	☒	☐
Have you ever had orthodontic (braces) treatment?	☐	☒	☐
Are your teeth sensitive to cold, hot, sweets or pressure?	☐	☒	☐
Do you have earaches or neck pains?	☐	☒	☐
Have you had any periodontal (gum) treatments?	☐	☒	☐
Do you wear removable dental appliances?	☐	☒	☐
Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐

If yes, explain:

How would you describe your current dental problem? **CHECK-UP**

Date of your last dental exam: **6 MONTHS AGO**

Date of last dental x-rays: **CAN'T REMEMBER**

What was done at that time? **CHECK-UP**

How do you feel about the appearance of your teeth? **OK**

MEDICAL INFORMATION

	Yes	No	Don't Know
If you answer yes to any of the 3 items below, please stop and return this form to the receptionist.			
Have you had any of the following diseases or problems?			
Active Tuberculosis	☐	☒	☐
Persistent cough greater than a 3 week duration	☐	☒	☐
Cough that produces blood	☐	☒	☐
Are you in good health?	☒	☐	☐
Has there been any change in your general health within the past year?	☐	☒	☐
Are you now under the care of a physician?	☒	☐	☐
If yes, what is/are the condition(s) being treated?	ARTHRITIS AND GLAUCOMA		
Date of last physical examination:	1 YEAR AGO		
Physician:			
NAME	DR. G.E. NEMAN		
PHONE	(828) 555-5634		
ADDRESS	CITY/STATE	ZIP	
616 SMITHFIELD PLACE	ASHEVILLE	28801	
NAME	PHONE		
ADDRESS	CITY/STATE	ZIP	
Have you had any serious illness, operation, or been hospitalized in the past 5 years?	☐	☒	☐
If yes, what was the illness or problem?			

Are you taking or have you recently taken any medicine(s) including non-prescription medicine? ☒ ☐ ☐

If yes, what medicine(s) are you taking?

Prescribed: **SEE LIST**

Over the counter:

Vitamins, natural or herbal preparations and/or diet supplements:

Are you taking, or have you taken, any diet drugs such as Pondimin (fenfluramine), Redux (dexphenfluramine) or phen-fen (fenfluramine-phenentermine combination)? ☐ ☒ ☐

Do you drink alcoholic beverages? ☐ ☒ ☐

If yes, how much alcohol did you drink in the last 24 hours?

In the past week?

Are you alcohol and/or drug dependent? ☐ ☒ ☐

If yes, have you received treatment? (circle one) Yes / No

Do you use drugs or other substances for recreational purposes? ☐ ☒ ☐

If yes, please list:

Frequency of use (daily, weekly, etc.):

Number of years of recreational drug use:

Do you use tobacco (smoking, snuff, chew)? ☐ ☒ ☐

If yes, how interested are you in stopping? (circle one) Very / Somewhat / Not interested

Do you wear contact lenses? ☐ ☒ ☐

PLEASE COMPLETE BOTH SIDES

Figure 17-26A. Page 1 of the medical history for fictitious patient I.

Are you allergic to or have you had a reaction to? <table border="0"> <tr> <td>Local anesthetics</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Aspirin</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Penicillin or other antibiotics</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Barbiturates, sedatives, or sleeping pills</td> <td>☐ Yes</td> <td>☐ No</td> <td>☒ Don't Know</td> </tr> <tr> <td>Sulfa drugs</td> <td>☐ Yes</td> <td>☐ No</td> <td>☒ Don't Know</td> </tr> <tr> <td>Codeine or other narcotics</td> <td>☐ Yes</td> <td>☐ No</td> <td>☒ Don't Know</td> </tr> <tr> <td>Latex</td> <td>☐ Yes</td> <td>☐ No</td> <td>☒ Don't Know</td> </tr> <tr> <td>Iodine</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Hay fever/seasonal</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Animals</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Food (specify) _____</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Other (specify) _____</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Metals (specify) _____</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> </table> To yes responses, specify type of reaction. _____ _____ _____	Local anesthetics	☐ Yes	☒ No	☐ Don't Know	Aspirin	☐ Yes	☒ No	☐ Don't Know	Penicillin or other antibiotics	☐ Yes	☒ No	☐ Don't Know	Barbiturates, sedatives, or sleeping pills	☐ Yes	☐ No	☒ Don't Know	Sulfa drugs	☐ Yes	☐ No	☒ Don't Know	Codeine or other narcotics	☐ Yes	☐ No	☒ Don't Know	Latex	☐ Yes	☐ No	☒ Don't Know	Iodine	☐ Yes	☒ No	☐ Don't Know	Hay fever/seasonal	☐ Yes	☒ No	☐ Don't Know	Animals	☐ Yes	☒ No	☐ Don't Know	Food (specify) _____	☐ Yes	☒ No	☐ Don't Know	Other (specify) _____	☐ Yes	☒ No	☐ Don't Know	Metals (specify) _____	☐ Yes	☒ No	☐ Don't Know	Have you had an orthopedic total joint (hip, knee, elbow, finger) replacement? ☒ Yes ☐ No ☐ Don't Know If yes, when was this operation done? <u>20 YEARS AGO</u> If you answered yes to the above question, have you had any complications or difficulties with your prosthetic joint? <u>NO</u> _____ Has a physician or previous dentist recommended that you take antibiotics prior to your dental treatment? ☐ Yes ☐ No ☒ Don't Know If yes, what antibiotic and dose? _____ Name of physician or dentist*: _____ Phone: _____
Local anesthetics	☐ Yes	☒ No	☐ Don't Know																																																		
Aspirin	☐ Yes	☒ No	☐ Don't Know																																																		
Penicillin or other antibiotics	☐ Yes	☒ No	☐ Don't Know																																																		
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Sulfa drugs	☐ Yes	☐ No	☒ Don't Know																																																		
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Animals	☐ Yes	☒ No	☐ Don't Know																																																		
Food (specify) _____	☐ Yes	☒ No	☐ Don't Know																																																		
Other (specify) _____	☐ Yes	☒ No	☐ Don't Know																																																		
Metals (specify) _____	☐ Yes	☒ No	☐ Don't Know																																																		

WOMEN ONLY			
Are you or could you be pregnant?	☐ Yes	☒ No	☐ Don't Know
Nursing?	☐ Yes	☒ No	☐ Don't Know
Taking birth control pills or hormonal replacement?	☐ Yes	☒ No	☐ Don't Know

Please (X) a response to indicate if you have or have not had any of the following diseases or problems.

<table border="0"> <tr> <td>Abnormal bleeding</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>AIDS or HIV infection</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Anemia</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Arthritis</td> <td>☒ Yes</td> <td>☐ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Rheumatoid arthritis</td> <td>☒ Yes</td> <td>☐ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Asthma</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Blood transfusion. If yes, date: _____</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Cancer/Chemotherapy/Radiation Treatment</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Cardiovascular disease. If yes, specify below:</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td> _____ Angina</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Arteriosclerosis</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Artificial heart valves</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Congenital heart defects</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Congestive heart failure</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Coronary artery disease</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Damaged heart valves</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Heart attack</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Heart murmur</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ High blood pressure</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Low blood pressure</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Mitral valve prolapse</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Pacemaker</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Rheumatic heart disease/Rheumatic fever</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Chest pain upon exertion</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Chronic pain</td> <td>☒ Yes</td> <td>☐ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Disease, drug, or radiation-induced immunosuppression</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Diabetes. If yes, specify below:</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td> _____ Type I (Insulin dependent)</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Type II</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dry Mouth</td> <td>☒ Yes</td> <td>☐ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Eating disorder. If yes, specify: _____</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Epilepsy</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Fainting spells or seizures</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Gastrointestinal disease</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>G.E. Reflux/persistent heartburn</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Glaucoma</td> <td>☒ Yes</td> <td>☐ No</td> <td>☐ Don't Know</td> </tr> </table>	Abnormal bleeding	☐ Yes	☒ No	☐ Don't Know	AIDS or HIV infection	☐ Yes	☒ No	☐ Don't Know	Anemia	☐ Yes	☒ No	☐ Don't Know	Arthritis	☒ Yes	☐ No	☐ Don't Know	Rheumatoid arthritis	☒ Yes	☐ No	☐ Don't Know	Asthma	☐ Yes	☒ No	☐ Don't Know	Blood transfusion. If yes, date: _____	☐ Yes	☒ No	☐ Don't Know	Cancer/Chemotherapy/Radiation Treatment	☐ Yes	☒ No	☐ Don't Know	Cardiovascular disease. If yes, specify below:	☐ Yes	☒ No	☐ Don't Know	_____ Angina				_____ Arteriosclerosis				_____ Artificial heart valves				_____ Congenital heart defects				_____ Congestive heart failure				_____ Coronary artery disease				_____ Damaged heart valves				_____ Heart attack				_____ Heart murmur				_____ High blood pressure				_____ Low blood pressure				_____ Mitral valve prolapse				_____ Pacemaker				_____ Rheumatic heart disease/Rheumatic fever				Chest pain upon exertion	☐ Yes	☒ No	☐ Don't Know	Chronic pain	☒ Yes	☐ No	☐ Don't Know	Disease, drug, or radiation-induced immunosuppression	☐ Yes	☒ No	☐ Don't Know	Diabetes. If yes, specify below:	☐ Yes	☒ No	☐ Don't Know	_____ Type I (Insulin dependent)				_____ Type II				Dry Mouth	☒ Yes	☐ No	☐ Don't Know	Eating disorder. If yes, specify: _____	☐ Yes	☒ No	☐ Don't Know	Epilepsy	☐ Yes	☒ No	☐ Don't Know	Fainting spells or seizures	☐ Yes	☒ No	☐ Don't Know	Gastrointestinal disease	☐ Yes	☒ No	☐ Don't Know	G.E. 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If yes, specify below:</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td> _____ Emphysema</td> <td></td> <td></td> <td></td> </tr> <tr> <td> _____ Bronchitis, etc.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Severe headaches/migraines</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Severe or rapid weight loss</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Sexually transmitted disease</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Sinus trouble</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Sleep disorder</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Sores or ulcers in the mouth</td> <td>☒ Yes</td> <td>☐ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Stroke</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Systemic lupus erythematosus</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Tuberculosis</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Thyroid problems</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Ulcers</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Excessive urination</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Do you have any disease, condition, or problem not listed above that you think I should know about?</td> <td>☐ Yes</td> <td>☒ No</td> <td>☐ Don't Know</td> </tr> <tr> <td>Please explain: _____</td> <td></td> <td></td> <td></td> </tr> </table>	Hemophilia	☐ Yes	☒ No	☐ Don't Know	Hepatitis, jaundice or liver disease	☐ Yes	☒ No	☐ Don't Know	Recurrent Infections	☐ Yes	☒ No	☐ Don't Know	If yes, indicate type of infection: _____				Kidney problems	☐ Yes	☒ No	☐ Don't Know	Mental health disorders. If yes, specify: _____	☐ Yes	☒ No	☐ Don't Know	Malnutrition	☐ Yes	☒ No	☐ Don't Know	Night sweats	☐ Yes	☒ No	☐ Don't Know	Neurological disorders. If yes, specify: _____	☐ Yes	☒ No	☐ Don't Know	Osteoporosis	☐ Yes	☒ No	☐ Don't Know	Persistent swollen glands in neck	☐ Yes	☒ No	☐ Don't Know	Respiratory problems. 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NOTE: Both Doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

Ida Iannuzzi
SIGNATURE OF PATIENT/LEGAL GUARDIAN

2/05/XX
DATE

FOR COMPLETION BY DENTIST

Comments on patient interview concerning health history:

Significant findings from questionnaire or oral interview:

Dental management considerations:

Health History Update: On a regular basis the patient should be questioned about any medical history changes, date and comments notated, along with signature.

Date

Comments

Signature of patient and dentist

Figure 17-26B. Page 2 of the medical history for fictitious patient I.

Medication List

Patient IDA IANNUZZI Date 2/05/XX

PRESCRIBED

REMERON 30MG/DAY

ALPHAGEN 1 DROP IN EYES T.I.D.

OVER-THE-COUNTER

NONE

VITAMINS, HERBS, DIET SUPPLEMENTS

DRINK ONE CAN OF ENSURE
EACH DAY

Figure 17-27. Medication list for fictitious patient I.

Vital Signs	
Name <u>IDA IANNUZZI</u>	Date <u>2/05/XX</u>
Temperature <u>96° F</u>	Pulse <u>60</u>
Respiratory Rate <u>16</u>	Blood Pressure <u>110/76</u>
Tobacco Use: ☒ Never ☐ Former	
☐ Cigarettes <u> </u> packs/day	☐ Pipe ☐ Smokeless tobacco

Figure 17-28. Vital signs findings for fictitious patient I.

Finding:

Location: right fore-head

Size: 3 cm in superior-inferior length

2.5 cm in width



Figure 17-29 for fictitious patient I.

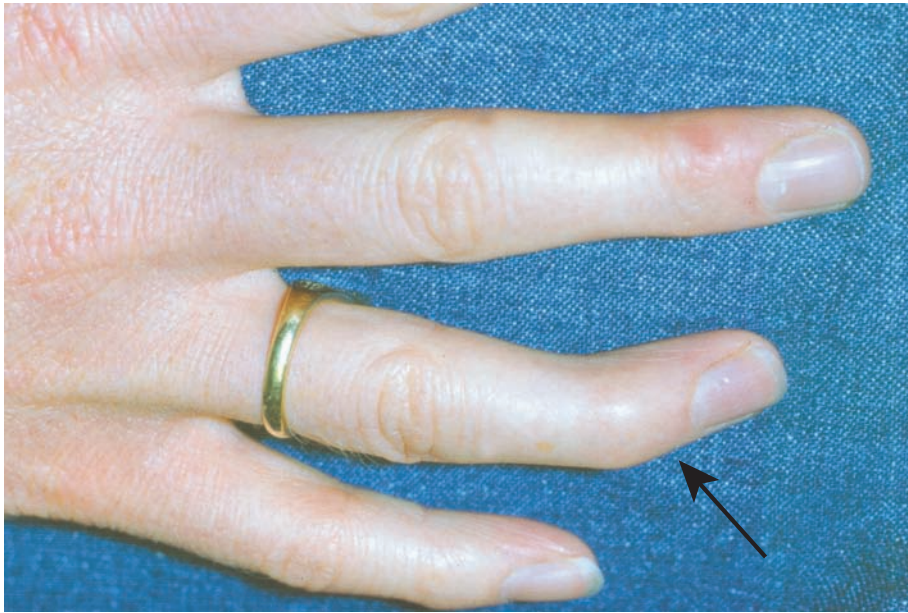


Figure 17-30 for fictitious patient I.

Finding:

Location: both hands,
arthritis



Figure 17-31 for fictitious patient I.

Finding:

Location: chin, near
lower lip

Size: 1 cm in superior-
inferior length

5 mm in width

Finding:

Location: right buccal mucosa

Size: 1 cm in superior-inferior length

5 mm in anterior-posterior width

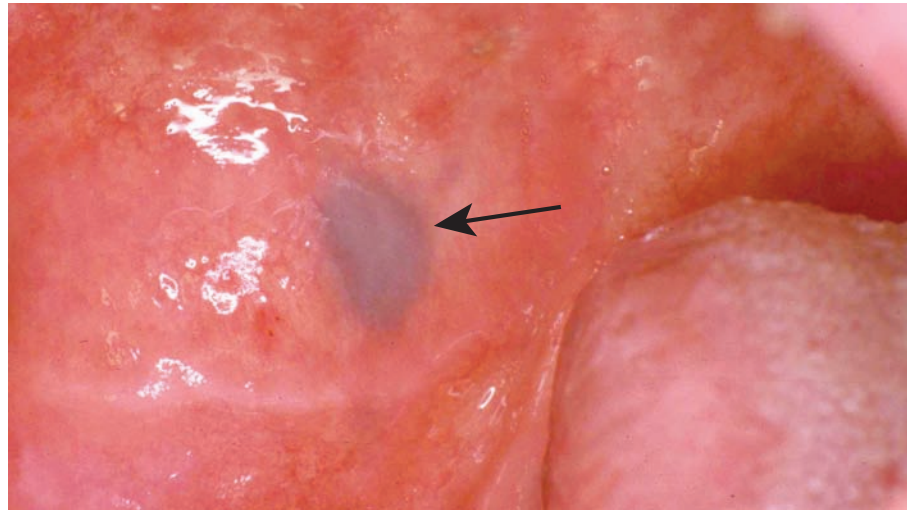


Figure 17-32 for fictitious patient I.



Figure 17-33 for fictitious patient I.

Area 1: Maxillary anterior sextant, facial aspect.



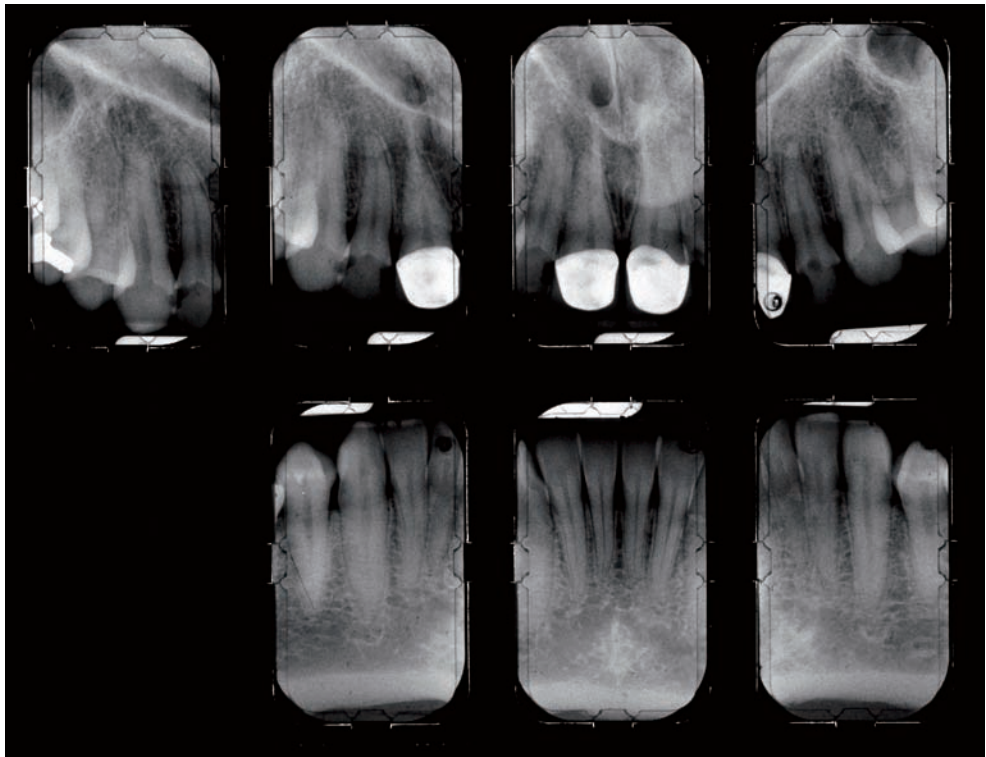
Figure 17-34 for fictitious patient I.

Area 1: Maxillary anterior sextant, facial view (close-up).



Figure 17-35 for fictitious patient I.

Area 2: Mandibular right posterior sextant, lingual aspect.



Right

Figure 17-36A

Left



Figure 17-36B

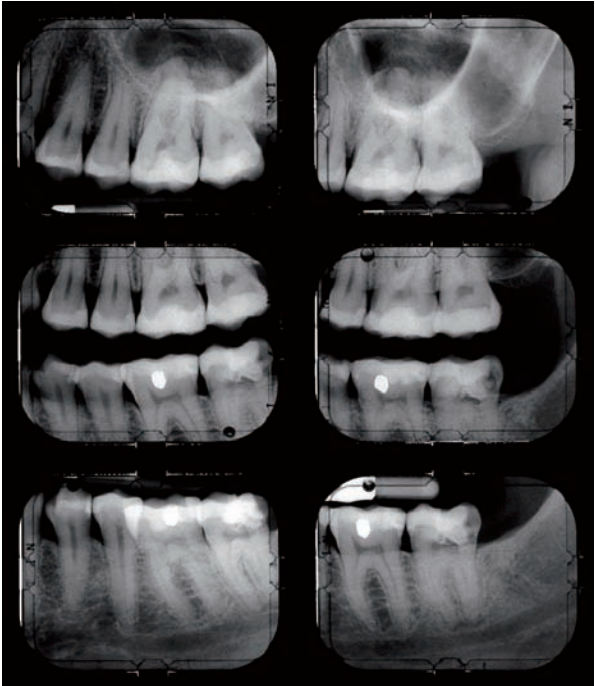


Figure 17-36C

Figure 17-36A–C. Radiographs for fictitious patient I.

SECTION 5 PATIENT J

ADA American Dental Association www.ada.org	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Medical Alert:</td> <td style="width: 15%;">Condition:</td> <td style="width: 15%;">Premedication:</td> <td style="width: 15%;">Allergies:</td> <td style="width: 15%;">Anesthesia:</td> <td style="width: 15%;">Date:</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:						
Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:								

HEALTH HISTORY FORM

Name: **JOLICOEUR, JOHN J.** Home Phone: **(828) 555-4567** Business Phone: ()
 Address: **2146 FAIRWAY LANE** City: **ASHEVILLE** State: **NC** Zip Code: **28644**
 Occupation: **RETIRED FINANCIAL PLANNER** Height: **6'0"** Weight: **170 LBS** Date of Birth: **69 YRS** Sex: **M** ☒ **F** ☐
 SS#: **777-77-7777** Emergency Contact: **JULIE JOLICOEUR** Relationship: **WIFE** Phone: **(828) 555-4567**

If you are completing this form for another person, what is your relationship to that person?

NAME	RELATIONSHIP

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Yes</th> <th style="width: 30%;">No</th> <th style="width: 40%;">Don't Know</th> </tr> </thead> <tbody> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> </tbody> </table> If yes, explain:	Yes	No	Don't Know	☐	☒	☐	☐	☒	☐	☐	☒	☐	☐	☒	☐	☐	☒	☐	☐	☒	☐	☐	☒	☐	☐	☒	☐	How would you describe your current dental problem? TOOTH ACHE Date of your last dental exam: CAN'T REMEMBER Date of last dental x-rays: ? What was done at that time? How do you feel about the appearance of your teeth? THEY ARE OK
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MEDICAL INFORMATION

If you answer yes to any of the 3 items below, please stop and return this form to the receptionist. Have you had any of the following diseases or problems? <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Yes</th> <th style="width: 30%;">No</th> <th style="width: 40%;">Don't Know</th> </tr> </thead> <tbody> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☒</td> <td>☐</td> </tr> </tbody> </table> Are you in good health? ☒ ☐ ☐ Has there been any change in your general health within the past year? ☐ ☒ ☐ Are you now under the care of a physician? ☐ ☒ ☐ If yes, what is/are the condition(s) being treated? Date of last physical examination: 10 YEARS AGO Physician: NONE <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">NAME</td> <td style="width: 30%;">PHONE</td> <td style="width: 40%;">ZIP</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>ADDRESS</td> <td>CITY/STATE</td> <td>ZIP</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>NAME</td> <td>PHONE</td> <td>ZIP</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>ADDRESS</td> <td>CITY/STATE</td> <td>ZIP</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> Have you had any serious illness, operation, or been hospitalized in the past 5 years? ☐ ☒ ☐ If yes, what was the illness or problem?	Yes	No	Don't Know	☐	☒	☐	☐	☒	☐	☐	☒	☐	NAME	PHONE	ZIP				ADDRESS	CITY/STATE	ZIP				NAME	PHONE	ZIP				ADDRESS	CITY/STATE	ZIP				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Yes</th> <th style="width: 30%;">No</th> <th style="width: 40%;">Don't Know</th> </tr> </thead> <tbody> <tr> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table> Are you taking or have you recently taken any medicine(s) including non-prescription medicine? NO If yes, what medicine(s) are you taking? NO Prescribed: Over the counter: Vitamins, natural or herbal preparations and/or diet supplements: Are you taking, or have you taken, any diet drugs such as Pondimin (fenfluramine), Redux (dexphenfluramine) or phen-fen (fenfluramine-phenentermine combination)? ☐ ☒ ☐ Do you drink alcoholic beverages? ☒ ☐ ☐ If yes, how much alcohol did you drink in the last 24 hours? 2 BEERS In the past week? 2 CASES OF BEER Are you alcohol and/or drug dependent? ☐ ☒ ☐ If yes, have you received treatment? (circle one) Yes / No Do you use drugs or other substances for recreational purposes? ☐ ☒ ☐ If yes, please list: Frequency of use (daily, weekly, etc.): Number of years of recreational drug use: Do you use tobacco (smoking, snuff, chew)? ☒ ☐ ☐ If yes, how interested are you in stopping? (circle one) Very / Somewhat / Not interested Do you wear contact lenses? ☐ ☒ ☐	Yes	No	Don't Know	☐	☐	☐
Yes	No	Don't Know																																									
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PLEASE COMPLETE BOTH SIDES

Figure 17-37A. Page 1 of the medical history for fictitious patient J.

Are you allergic to or have you had a reaction to? Local anesthetics ☐ Yes ☐ No ☒ Don't Know Aspirin ☐ Yes ☒ No ☐ Don't Know Penicillin or other antibiotics ☐ Yes ☒ No ☐ Don't Know Barbiturates, sedatives, or sleeping pills ☐ Yes ☒ No ☐ Don't Know Sulfa drugs ☐ Yes ☒ No ☐ Don't Know Codeine or other narcotics ☐ Yes ☒ No ☐ Don't Know Latex ☐ Yes ☒ No ☐ Don't Know Iodine ☐ Yes ☒ No ☐ Don't Know Hay fever/seasonal ☐ Yes ☒ No ☐ Don't Know Animals ☐ Yes ☒ No ☐ Don't Know Food (specify) _____ ☐ Yes ☒ No ☐ Don't Know Other (specify) _____ ☐ Yes ☒ No ☐ Don't Know Metals (specify) _____ ☐ Yes ☒ No ☐ Don't Know To yes responses, specify type of reaction. _____ _____ _____	Have you had an orthopedic total joint (hip, knee, elbow, finger) replacement? ☐ Yes ☒ No ☐ Don't Know If yes, when was this operation done? _____ If you answered yes to the above question, have you had any complications or difficulties with your prosthetic joint? _____ _____ Has a physician or previous dentist recommended that you take antibiotics prior to your dental treatment? ☐ Yes ☒ No ☐ Don't Know If yes, what antibiotic and dose? _____ Name of physician or dentist*: _____ Phone: _____
--	--

WOMEN ONLY	
Are you or could you be pregnant?	☐ Yes ☐ No ☐ Don't Know
Nursing?	☐ Yes ☐ No ☐ Don't Know
Taking birth control pills or hormonal replacement?	☐ Yes ☐ No ☐ Don't Know

Please (X) a response to indicate if you have or have not had any of the following diseases or problems.

Abnormal bleeding ☐ Yes ☒ No ☐ Don't Know AIDS or HIV infection ☐ Yes ☒ No ☐ Don't Know Anemia ☐ Yes ☒ No ☐ Don't Know Arthritis ☐ Yes ☒ No ☐ Don't Know Rheumatoid arthritis ☐ Yes ☒ No ☐ Don't Know Asthma ☐ Yes ☒ No ☐ Don't Know Blood transfusion. If yes, date: _____ ☐ Yes ☒ No ☐ Don't Know Cancer/Chemotherapy/Radiation Treatment ☐ Yes ☒ No ☐ Don't Know Cardiovascular disease. If yes, specify below: ☐ Yes ☒ No ☐ Don't Know _____ Angina _____ Heart murmur _____ Arteriosclerosis _____ High blood pressure _____ Artificial heart valves _____ Low blood pressure _____ Congenital heart defects _____ Mitral valve prolapse _____ Congestive heart failure _____ Pacemaker _____ Coronary artery disease _____ Rheumatic heart _____ Damaged heart valves _____ disease/Rheumatic fever _____ Heart attack Chest pain upon exertion ☐ Yes ☒ No ☐ Don't Know Chronic pain ☐ Yes ☒ No ☐ Don't Know Disease, drug, or radiation-induced immunosuppression ☐ Yes ☒ No ☐ Don't Know Diabetes. If yes, specify below: ☐ Yes ☒ No ☐ Don't Know _____ Type I (Insulin dependent) _____ Type II Dry Mouth ☐ Yes ☒ No ☐ Don't Know Eating disorder. If yes, specify: _____ ☐ Yes ☒ No ☐ Don't Know Epilepsy ☐ Yes ☒ No ☐ Don't Know Fainting spells or seizures ☐ Yes ☒ No ☐ Don't Know Gastrointestinal disease ☐ Yes ☒ No ☐ Don't Know G.E. Reflux/persistent heartburn ☐ Yes ☒ No ☐ Don't Know Glaucoma ☐ Yes ☒ No ☐ Don't Know	Hemophilia ☐ Yes ☒ No ☐ Don't Know Hepatitis, jaundice or liver disease ☐ Yes ☒ No ☐ Don't Know Recurrent Infections ☐ Yes ☒ No ☐ Don't Know If yes, indicate type of infection: _____ ☐ Yes ☒ No ☐ Don't Know Kidney problems ☐ Yes ☒ No ☐ Don't Know Mental health disorders. If yes, specify: _____ ☐ Yes ☒ No ☐ Don't Know Malnutrition ☐ Yes ☒ No ☐ Don't Know Night sweats ☐ Yes ☒ No ☐ Don't Know Neurological disorders. If yes, specify: _____ ☐ Yes ☒ No ☐ Don't Know Osteoporosis ☒ Yes ☐ No ☐ Don't Know Persistent swollen glands in neck ☐ Yes ☒ No ☐ Don't Know Respiratory problems. If yes, specify below: ☐ Yes ☒ No ☐ Don't Know _____ Emphysema _____ Bronchitis, etc. Severe headaches/migraines ☐ Yes ☒ No ☐ Don't Know Severe or rapid weight loss ☐ Yes ☒ No ☐ Don't Know Sexually transmitted disease ☐ Yes ☒ No ☐ Don't Know Sinus trouble ☐ Yes ☒ No ☐ Don't Know Sleep disorder ☐ Yes ☒ No ☐ Don't Know Sores or ulcers in the mouth ☐ Yes ☒ No ☐ Don't Know Stroke ☐ Yes ☒ No ☐ Don't Know Systemic lupus erythematosus ☐ Yes ☒ No ☐ Don't Know Tuberculosis ☐ Yes ☒ No ☐ Don't Know Thyroid problems ☐ Yes ☒ No ☐ Don't Know Ulcers ☐ Yes ☒ No ☐ Don't Know Excessive urination ☐ Yes ☒ No ☐ Don't Know Do you have any disease, condition, or problem not listed above that you think I should know about? ☒ Yes ☐ No ☐ Don't Know Please explain: HARD OF HEARING
---	--

NOTE: Both Doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

John J. Jolicœur
SIGNATURE OF PATIENT/LEGAL GUARDIAN

2/05/XX
DATE

FOR COMPLETION BY DENTIST

Comments on patient interview concerning health history:

Significant findings from questionnaire or oral interview:

Dental management considerations:

Health History Update: On a regular basis the patient should be questioned about any medical history changes, date and comments notated, along with signature.

Date

Comments

Signature of patient and dentist

Figure 17-37B. Page 2 of the medical history for fictitious patient J.

Medication List	
Patient	JOHN JOLICOEUR
Date	2/05/XX
PRESCRIBED	
NONE	
OVER-THE-COUNTER	
ASPIRIN	
VITAMINS, HERBS, DIET SUPPLEMENTS	
NONE	

Figure 17-38. Medication list for fictitious patient J.

Smoking History

Patient JOHN JOLICOEUR Date 2/05/XX

1. At what age did you begin to smoke? 13 YRS
2. How many cigarettes do you smoke per day now? 2 PACKS
Per day at your heaviest? 2 PACKS
3. How many times have you tried to stop smoking? _____
☒ Never tried to stop
4. What is the longest period of time you have gone without smoking? N/A
5. What forms of tobacco are you currently using? (Please check all that apply.)

☒ Cigarettes	☐ Chewing tobacco
☐ Pipes	☒ Snuff
☐ Cigars	☐ Other
6. Do your ☒ family members, ☒ friends, ☐ co-workers smoke? (Please check all that apply. Circle if you live with any of these smokers.)
7. What smoking cessation methods have you tried? (Please check all that apply.)

☒ None	☐ Self-help programs
☐ Cold turkey	☐ Gradual reduction
☐ Hypnosis	☐ Laser
☐ Acupuncture	☐ Other _____
8. Are you being ☒ encouraged, or ☒ discouraged to stop smoking by any of the following? (Please check all that apply.)

☐ Spouse or significant other	☐ Friend
☐ Child	☐ Co-worker
☐ Other family member	
9. Who do you turn to for support? (Please check all that apply.)

☐ Spouse or significant other	☐ Counselor
☐ Parent	☐ Health care provider
☒ Sibling	☐ Friend
☐ Other family member	☐ Co-worker
☒ Clergy/rabbi/priest	

Please rank the following on a scale of 1 (strongly disagree) to 5 (strongly agree):

I am ready to stop smoking at this time:	1 2 3 <u>4</u> 5
I am concerned about weight gain:	<u>1</u> 2 3 4 5
I am concerned about dealing with stress:	<u>1</u> 2 3 4 5

John Jolicoeur
Patient Signature

Miccala Smith, DHI
Reviewed by

Figure 17-39.

Vital Signs	
Name <u>JOHN JOLICOEUR</u>	Date <u>2/05/XX</u>
Temperature <u>98.4° F</u>	Pulse <u>90</u>
Respiratory Rate <u>18</u>	Blood Pressure <u>180/110</u>
Tobacco Use: ☐ Never ☐ Former	
☒ Cigarettes <u>2</u> packs/day ☐ Pipe ☒ Smokeless tobacco	

Figure 17-40. Vital signs findings for fictitious patient J.

**Finding:**

Location: right side of neck

Size: 5 cm in diameter

Figure 17-41 for fictitious patient J.

Finding:

Location: left cheek
adjacent to ala nasi

Size: 17 mm in superior-
inferior height

2 mm in width



Figure 17-42 for fictitious patient J.

Finding:

Location: left buccal
mucosa

Size: diffuse

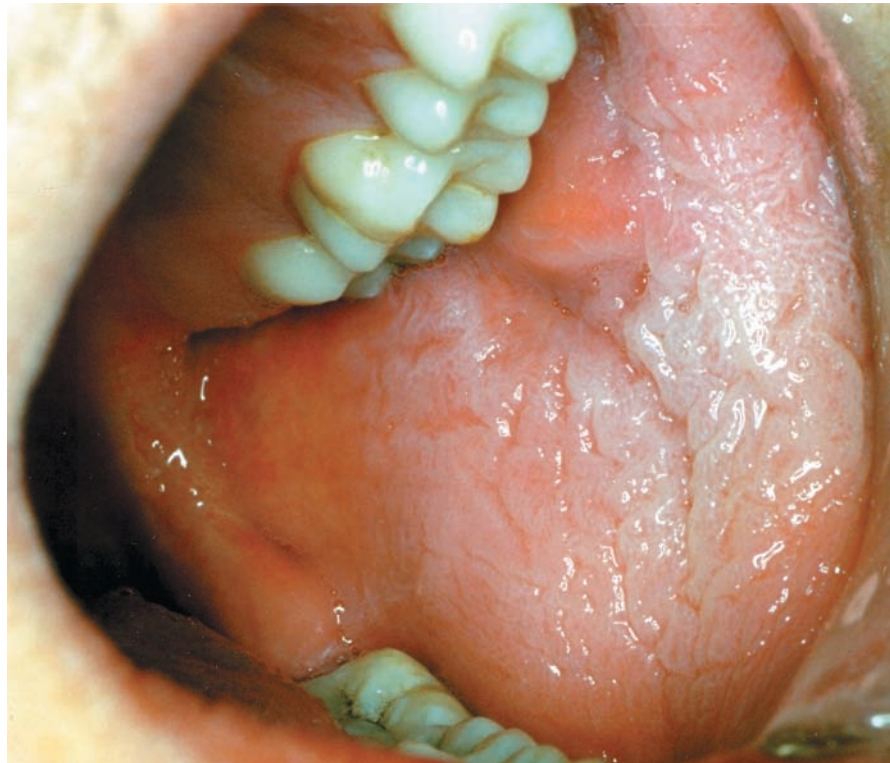


Figure 17-43 for fictitious patient J.



Figure 17-44 for fictitious patient J.

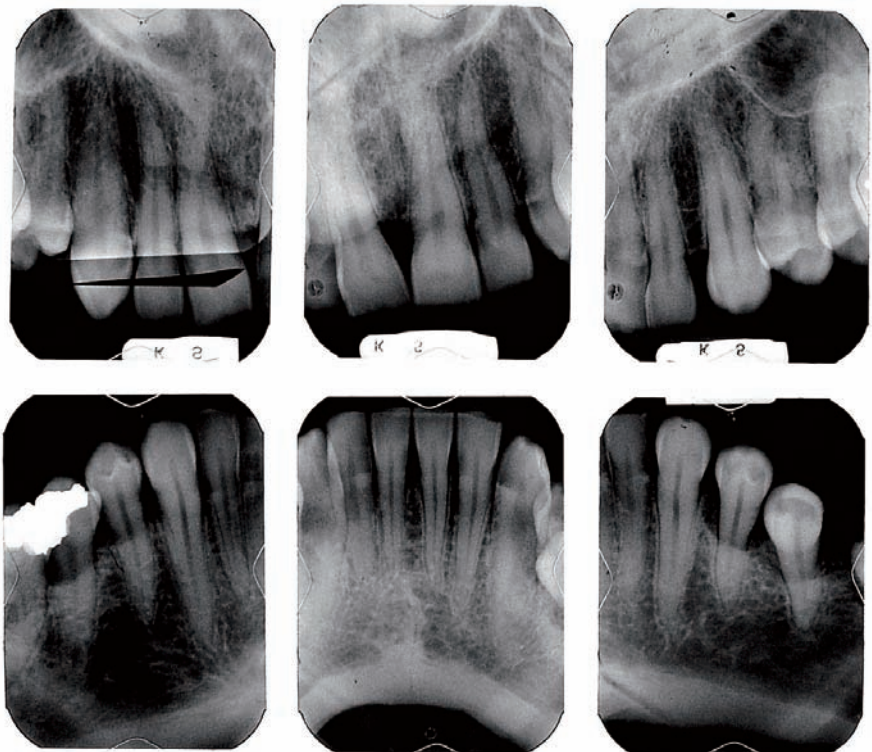
Area 1: Maxillary anterior sextant, facial aspect

Area 2: Mandibular anterior sextant, facial aspect



Figure 17-45 for fictitious patient J.

Area 3: Mandibular right posterior sextant, lingual aspect



Right

Figure 17-46A

Left

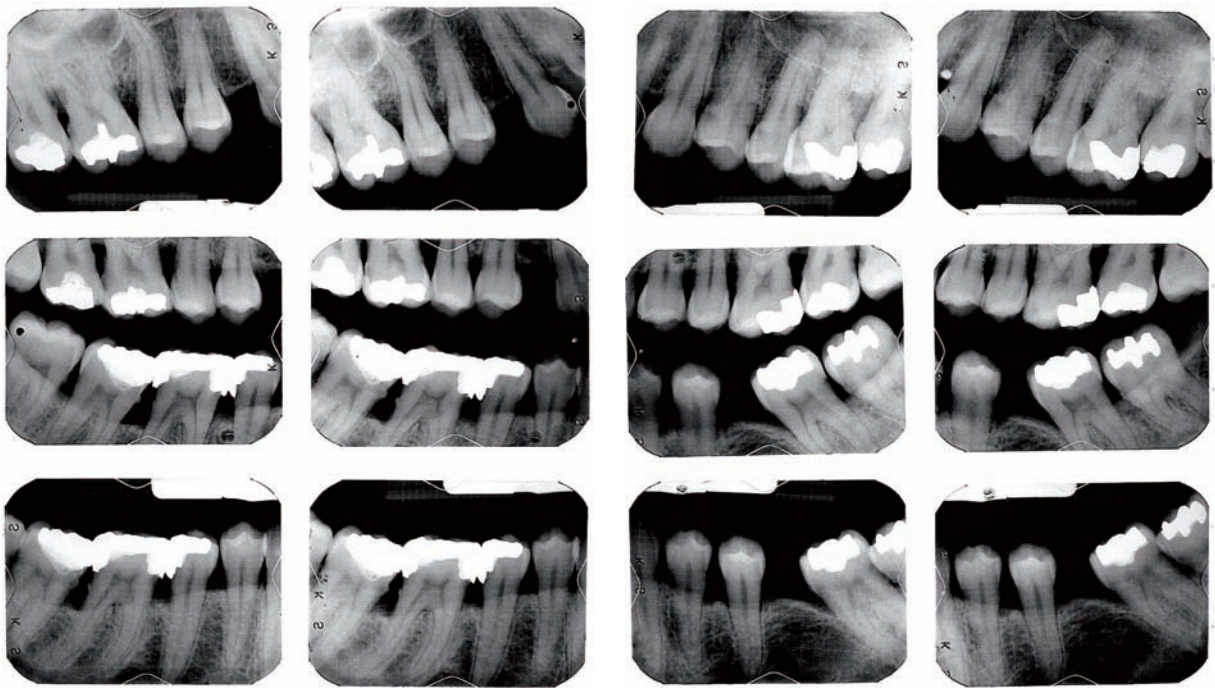


Figure 17-46B

Figure 17-46C

Figure 17-46A–C. Radiographs for fictitious patient J.

SECTION 6 PATIENT K

ADA American Dental Association www.ada.org	Medical Alert:	Condition:	Premedication:	Allergies:	Anesthesia:	Date:
---	----------------	------------	----------------	------------	-------------	-------

HEALTH HISTORY FORM

Name: **KANG KWAN K.** Home Phone: **(828) 555-5678** Business Phone: ()

Address: **25 CHESTNUT DRIVE** City: **MILLS RIVER** State: **NC** Zip Code: **28705**

Occupation: **RETIRED, INDUSTRIAL ENGINEER** Height: **5'11"** Weight: **190 LBS** Date of Birth: **75 YRS** Sex: **M** ☒ **F** ☐

SS#: **979-99-9999** Emergency Contact: **SALLY KWAN** Relationship: **DAUGHTER** Phone: **(828) 555-8765**

If you are completing this form for another person, what is your relationship to that person?

NAME	RELATIONSHIP

For the following questions, please (X) whichever applies, your answers are for our records only and will be kept confidential in accordance with applicable laws. Please note that during your initial visit you will be asked some questions about your responses to this questionnaire and there may be additional questions concerning your health. This information is vital to allow us to provide appropriate care for you. This office does not use this information to discriminate.

DENTAL INFORMATION

<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">Yes</th> <th style="width: 10%; text-align: center;">No</th> <th style="width: 10%; text-align: center;">Don't Know</th> </tr> </thead> <tbody> <tr> <td>Do your gums bleed when you brush?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Have you ever had orthodontic (braces) treatment?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Are your teeth sensitive to cold, hot, sweets or pressure?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Do you have earaches or neck pains?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Have you had any periodontal (gum) treatments?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Do you wear removable dental appliances?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Have you had a serious/difficult problem associated with any previous dental treatment?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> </tbody> </table> If yes, explain:		Yes	No	Don't Know	Do your gums bleed when you brush?	☐	☒	☐	Have you ever had orthodontic (braces) treatment?	☐	☒	☐	Are your teeth sensitive to cold, hot, sweets or pressure?	☐	☒	☐	Do you have earaches or neck pains?	☐	☒	☐	Have you had any periodontal (gum) treatments?	☐	☒	☐	Do you wear removable dental appliances?	☐	☒	☐	Have you had a serious/difficult problem associated with any previous dental treatment?	☐	☒	☐	How would you describe your current dental problem? TOOTH ACHE Date of your last dental exam: 5 YEARS AGO Date of last dental x-rays: What was done at that time? How do you feel about the appearance of your teeth? OK
	Yes	No	Don't Know																														
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PLEASE COMPLETE BOTH SIDES

Figure 17-47A. Page 1 of the medical history for fictitious patient K.

Are you allergic to or have you had a reaction to?		Yes	No	Don't Know			Yes	No	Don't Know																																																																																																																																																																																																																																																
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Codeine or other narcotics		☐	☒	☐																																																																																																																																																																																																																																																					
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NOTE: Both Doctor and patient are encouraged to discuss any and all relevant patient health issues prior to treatment.

I certify that I have read and understand the above. I acknowledge that my questions, if any, about inquiries set forth above have been answered to my satisfaction. I will not hold my dentist, or any other member of his/her staff, responsible for any action they take or do not take because of errors or omissions that I may have made in the completion of this form.

Kwan Kang 2/05/XX
SIGNATURE OF PATIENT/LEGAL GUARDIAN DATE

FOR COMPLETION BY DENTIST

Comments on patient interview concerning health history: _____

Significant findings from questionnaire or oral interview: _____

Dental management considerations: _____

Health History Update: On a regular basis the patient should be questioned about any medical history changes, date and comments notated, along with signature.

Date	Comments	Signature of patient and dentist
_____	_____	_____

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Figure 17-47B. Page 2 of the medical history for fictitious patient K.

Medication List	
Patient	KWAN KANG
Date	2/05/XX
PRESCRIBED	
SUPPLEMENTAL OXYGEN	
MUCOMYST 2ML OF 10% SOLUTION EVERY 4 HOURS	
ATROVENT 2 PUFFS Q.I.D.	
OVER-THE-COUNTER	
NONE	
VITAMINS, HERBS, DIET SUPPLEMENTS	
NONE	

Figure 17-48. Medication list for fictitious patient K.

Vital Signs	
Name <u>KWAN KANG</u>	Date <u>2/05/XX</u>
Temperature <u>96.8° F</u>	Pulse <u>90</u>
Respiratory Rate <u>20</u>	Blood Pressure <u>118/80</u>
Tobacco Use: ☐ Never ☒ Former	
☒ Cigarettes <u>3</u> packs/day ☐ Pipe ☐ Smokeless tobacco	
<u>NO LONGER SMOKES</u>	

Figure 17-49. Vital signs findings for fictitious patient K.

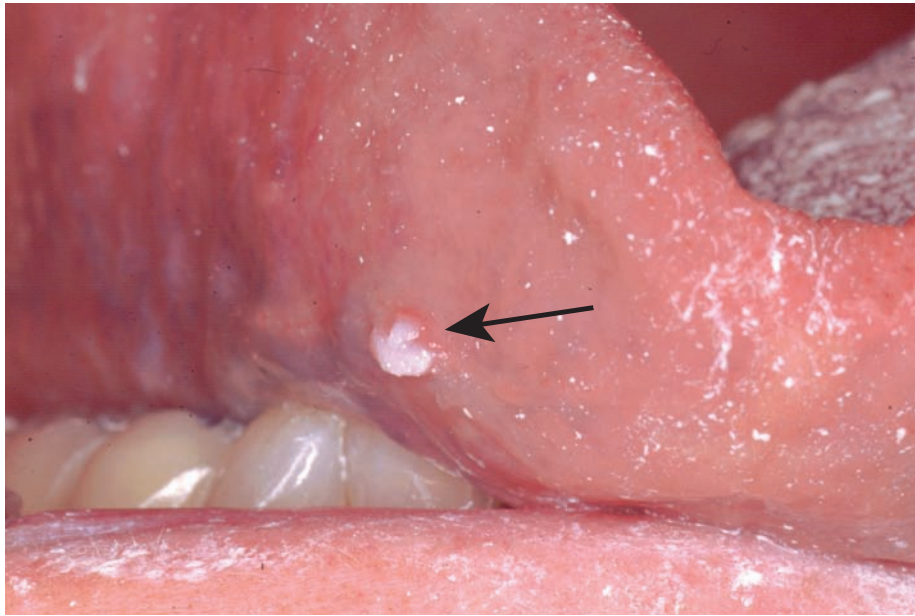
Finding:

Location: left tempo-
ral region

Size: 1 mm in
diameter



Figure 17-50 for fictitious patient K.

**Finding:**

Location: ventral surface of tongue, to right of midline

Size: 6 mm in diameter

Figure 17-51 for fictitious patient K.



Figure 17-52 for fictitious patient K.

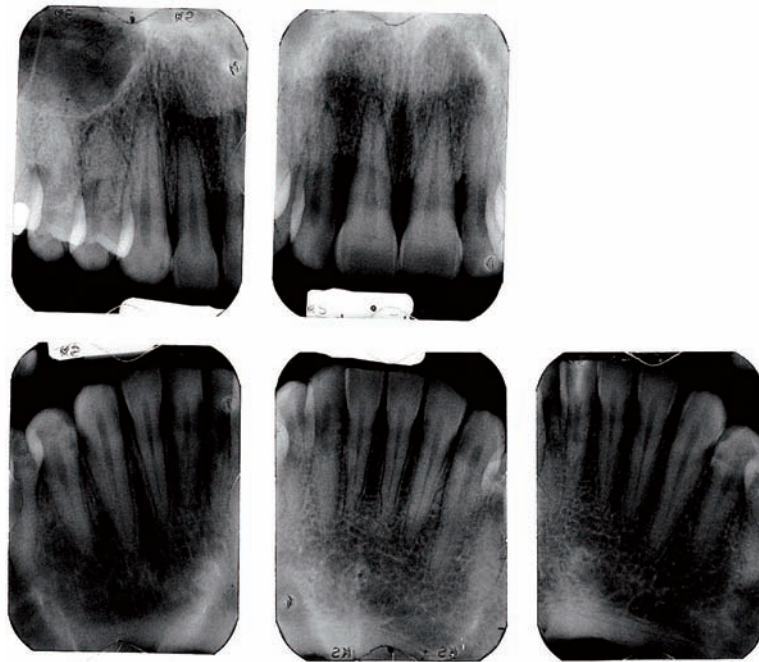
Area 1: Maxillary anterior sextant, facial aspect.

Area 2: Mandibular anterior sextant, facial aspect.



Figure 17-53 for fictitious patient K.

Area 3: Mandibular left posterior sextant, lingual aspect.



Right

Figure 17-54A

Left

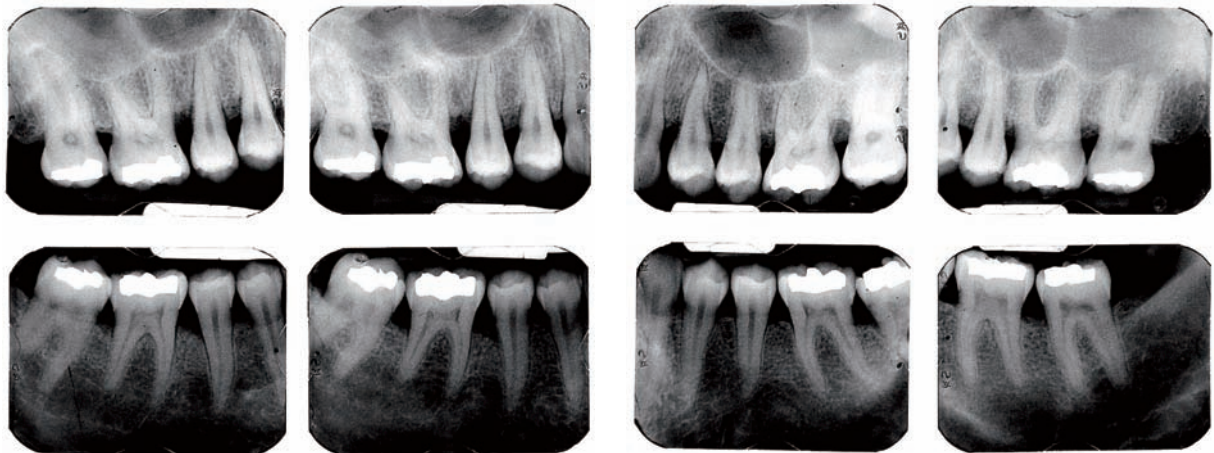


Figure 17-54B

Figure 17-54C

Figure 17-54A–C. Radiographs for fictitious patient K.

SECTION 7 FOCUS ON COMMUNICATION

COMMUNICATION ROLE-PLAYS FOR COMPREHENSIVE PATIENTS

Student: _____

Evaluator: _____

Date: _____

Roles:

- Student 1 = Plays the role of a fictitious patient.
- Student 2 = Plays the role of the clinician.
- Student 3 or Instructor = Plays the role of the clinic instructor near the end of the role-play.

DIRECTIONS: Play the role of the clinician in one or more role-plays selected by your instructor. If desired, Communication Skill Checklists can be duplicated from previous modules in the book.

Glossary

A

Abdominal aortic aneurysm—occurs when part of the aorta—the main artery of the body—becomes weakened. If left untreated the aorta can burst.

Addiction—a chronic dependence on a substance, such as smoking, despite adverse consequences.

Aneroid manometer—a round dial-type gauge to indicate pressure readings.

Angle's classification—a system for classifying the relationship of the mandibular teeth to the maxillary teeth.

Antecubital fossa—the hollow or depressed area in the underside of the arm at the bend of the elbow.

Aphasia—a disorder that results from damage to language centers of the brain. It can result in a reduced ability to understand what others are saying, to express ideas, or to be understood.

Ask. Advise. Refer. (AAR)—the ADHA's national Smoking Cessation Initiative (SCI) designed to promote cessation intervention by dental hygienists.

Asymptomatic—a condition or disease that has no symptoms that are detectable to the patient.

Auscultation—the act of listening for sounds within the body to evaluate the condition of the heart, blood vessels, lungs, or other organs.

Auscultatory gap—a period of abnormal silence that occurs between the Korotkoff Phases that are heard during the measurement of blood pressure.

B

Bidis—small, often flavored, hand-rolled cigarettes.

Blood pressure—pressure exerted against the blood vessel walls as blood flows through them.

Bulla—a large blister filled with clear fluid; usually over 1 cm in diameter; commonly seen in burns.

C

Cancer—a term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissues and spread through the bloodstream and lymphatic system to other parts of the body. *Also see head and neck cancer.*

Carcinogen—a chemical or other substance that causes cancer.

Chewing tobacco—also known as spit tobacco, chew, dip, and chaw—is tobacco cut for chewing.

Chronic obstructive pulmonary disease (COPD)—a lung disease in which the airways in the lungs produce excess mucus resulting in frequent coughing. Smoking accounts for 80% to 90% of the risk for developing COPD.

Circumvallate papillae—the 8 to 12 large papillae that form a V-shaped row on the tongue.

Closed questions—questions that can be answered with a yes or no, or a one- or two-word response, and do not provide an opportunity for the patient to elaborate.

Communication—the exchange of information between individuals.

Coronary artery disease (CAD)—a thickening of the coronary arteries—is the most common type of heart disease. CAD results in a narrowing of the arteries so that the supply of blood and oxygen to the heart is restricted or blocked. Smoking is the major risk factor for CAD.

Cultural awareness—the development of sensitivity and cross-cultural understanding.

Cultural blindness—occurs when a person ignores differences and proceeds as though the differences did not exist (e.g., “*There is no reason to change how we do things, as long we are nice to our patients, that is enough.*”).

Cultural competency—the application of cultural knowledge, behaviors, and interpersonal and clinical skills to enhance a dental health care provider’s effectiveness in managing patient care.

Cultural imposition—is the belief that everyone should conform to the majority (e.g., “*Why should we have to translate our forms, if they can’t read English they can just go elsewhere.*”).

Culture—a pattern of learned behavior, values, and beliefs exhibited by a group that shares history and geographic proximity. Culture determines health attitudes, roles, and behaviors of providers and patients.

D

Dental health history—a record of the patient’s past and present dental experiences.

Diastolic pressure—the pressure exerted against the vessel walls when the heart relaxes.

Diplomacy—the art of treating people with tact and genuine concern.

Discrimination—the differential treatment of an individual due to minority status (e.g., “*We just are not equipped to care for people like that.*”).

Dysarthria—speech problems that are caused by the muscles involved with speaking or the nerves controlling them. Individuals with dysarthria have difficulty expressing certain words or sounds.

E

Empathy—identifying with the feelings or thoughts of another person; an essential factor in effective communication.

Environmental tobacco smoke (ETS)—occurs when nonsmokers inhale a mixture of smoke from a burning cigarette, pipe, or cigar and the smoke exhaled by the smoker. Also known as **secondhand smoke** or **passive smoking**.

Estimated systolic pressure—an estimation of the actual systolic blood pressure that is determined by palpating the brachial artery pulse and inflating the cuff until the pulsation disappears. This point at which the pulsation disappears is the estimated systolic pressure.

Ethnic competence—the development of skills that assist a person to behave in a culturally appropriate way to meet the expectations and behaviors of a given group.

Ethnicity and culture—qualities of human groups, including language, diet, attire, religions, customs, beliefs, worldviews, kinship systems, and historical or territorial identity.

Ethnocentrism—the inability to accept another cultures’ worldview (e.g., “*My way is best.*”).

F

Filiform papillae—the long, thin, gray, hairlike papillae that cover the anterior two thirds of the dorsal surface of the tongue.

Fissure—a linear crack in the top two layers of the skin or mucosa.

Foliate papillae—the 3 to 5 large, red, leaflike projections on the lateral border of the posterior third of the tongue.

Fungiform papillae—the broad, round, red, mushroom-shaped papillae of the tongue.

G

Galinstan—the most common alternative to a mercury thermometer.

Glass thermometer—a small glass tube with a bulb at the end containing mercury that is used to take an oral temperature. When the thermometer bulb is warmed, the mercury moves up the glass tube.

Goiter—an enlarged thyroid gland.

H

Head and neck cancer—cancer that arises in the head or neck region (in the nasal cavity, sinuses, lip, mouth, salivary glands, throat, or larynx [voice box]).

Health literacy—the ability of an individual to understand and act on health information and advice.

Hookah—a kind of tobacco water pipe.

Hypertension—high blood pressure; blood pressure that stays at or above 140/90.

Hypertensive—an individual with abnormally high blood pressure.

Hypotensive—an individual with abnormally low blood pressure.

I

Idiom—a distinctive, often colorful expression in which the meaning cannot be understood from the combined of its individual words (e.g., the phrase “to kill two birds with one stone.”).

K

Korotkoff sounds—the series of sounds that is heard as the pressure in the sphygmomanometer cuff is released during the measurement of arterial blood pressure.

L

Laryngectomy—the surgical removal of the voice box due to cancer; affects approximately 9,000 individuals each year, most are older adults.

Lesion of the soft tissue—an area of abnormal appearing skin or mucosa that does not resemble the soft tissue surrounding it, such as a variation in color, texture, or form of an area of skin or mucosa.

Lymph—a clear fluid that carries nutrients and waste materials between the body tissues and the bloodstream.

Lymphadenopathy—the term for enlarged lymph nodes.

Lymphatic system—a network of lymph nodes connected by lymphatic vessels that plays an important part in the body’s defense against infection.

Lymph nodes—small, bean-shaped structures that filter out and trap bacteria, fungi, viruses, and other unwanted substances to eliminate safely them from the body.

M

Macule—a small, flat, discolored spot on the skin or mucosa that does not include a change in skin texture or thickness; less than 1 cm in size; the discoloration can be brown, black, red, or lighter than the surrounding skin.

Malocclusion—the improper positioning of the teeth and jaws.

Manometer—a gauge that measures the air pressure in millimeters. *Also see aneroid manometer and mercury manometer*

Mercury manometer—a device with a column of mercury to indicate pressure readings.

Metastasis—the spread of cancer from the original tumor site to other parts of the body by tiny clumps of cells transported by the blood or lymphatic system.

Mixed dentition—a combination of primary and permanent teeth in a dentition.

Multilanguage Health History Project—an initiative of the University of the Pacific Dental School (UOP) to address the needs of patients and dental health care providers who do not speak the same language.

N

Nicotine replacement therapy (NRT)—nicotine-containing medications used for smoking cessation.

Nodule—a raised, marblelike lesion detectable by touch, usually 1 cm or more in diameter; it can be felt as a hard mass distinct from the tissue surrounding it.

Nonverbal communication—the transfer of information between persons without using spoken, written, or sign language.

O

Occlusion—the relationship of the teeth to each other when the incisal and occlusal surfaces of the mandibular arch contact those of the maxillary arch.

Open-ended questions—questions that require more than a one-word response and allow the patient to express ideas, feelings, and opinions.

Overbite—the amount of vertical overlap that occurs when the maxillary incisors vertically overlap the mandibular incisors.

Overjet—the horizontal distance between the incisal edges of the maxillary teeth and the mandibular teeth.

P

Papillae—the taste sensitive structures of the tongue. *Also see filiform, fungiform, foliate, and circumvallate papilla.*

Papule—a solid raised lesion that is usually less than 1 cm in diameter; may be any color.

Parotid glands—the largest of the salivary glands; each gland is located between the ear and the jaw.

Patch—a flat, discolored spot on the skin or mucosa; larger than 1 cm in size.

Peripheral vascular disease (PVD)—a vascular disease that occurs when fat and cholesterol build up on the walls of the arteries blocking the supply blood to the arms and legs.

Personal filters—when involved in the act of communication, factors in a person's life, such as his or her life experiences, age, gender, and cultural diversity, that act as filters to incoming information. For this reason, the message received may not be the message sent. Normal human biases or personalized filters create major barriers to effective communication.

Personal space—or distance from other persons; a powerful concept that we use in determining the meaning of messages conveyed by another person.

Pharmacotherapy—the treatment of a medical condition using one or more medications.

Plaque—a superficial raised lesion often formed by the coalescence (joining) of closely grouped papules; more than 1 cm in diameter; a plaque differs from a nodule in its height, a plaque is flattened and a nodule is a bump.

Presbycusis—the loss of hearing that gradually occurs in most individuals as they grow old.

Proxemics—the study of the distance an individual maintains from other persons and how this separation relates to environmental and cultural factors.

Pulse points—the sites on the surface of the body where rhythmic beats of an artery can be easily felt.

Pulse rate—an indication of an individual's heart rate. Pulse rate is measured by counting the number of rhythmic beats that can be felt over an artery in 1 minute.

Pustule—a small, raised lesion filled with pus.

Q

Quitlines—toll-free telephone centers staffed by trained smoking cessation experts.

R

Racial group—a group of people who share socially constructed differences based on visible characteristics or regional linkages.

Reflection—the act of repeating something that someone has just said.

Respiratory rate—is measured by counting the number of times that a patient's chest rises in one minute.

Risk factors—are conditions that increase a person's chances of getting a disease (such as cancer).

S

Secondhand smoke—occurs when nonsmokers inhale a mixture of smoke from a burning cigarette, pipe, or cigar and the smoke exhaled by the smoker.

Service animal—any guide dog or other animal that is trained to provide assistance to a person with a disability.

Smoker's cough—the chronic cough experienced by smokers because smoking impairs the lung's ability to clean out harmful material. Coughing is the body's way of trying to get rid of the harmful material in the lungs.

Smokeless tobacco—is tobacco that is not smoked but used in another form. Snuff and chewing tobacco are the two main forms of smokeless tobacco in use in the United States and Canada.

Snuff—a smokeless tobacco in the form of a powder that is placed between the gingiva and the lip or cheek or inhaled into the nose.

Soft tissue lesion—*see lesion of the soft tissue.*

Sphygmomanometer—a device used to measure blood pressure.

Stereotype—an oversimplified, standardized image that one individual uses to categorize other individuals or groups.

Sternomastoid muscle—a long, thick, superficial muscle on each side of the head with its origin on the mastoid process and insertion on the sternum and clavicle.

Stethoscope—a device that makes sound louder and transfers it to the clinician's ears.

Sublingual glands—the smallest of the three glands salivary glands; located in the anterior floor of the mouth next to the mandibular canines.

Submandibular glands—the salivary glands located below the jaw toward the back of the mouth.

Systolic pressure—the pressure created by the blood as it presses through and against the vessel walls. *Also see estimated systolic pressure.*

T

Temporomandibular joint (TMJ)—the joint that connects the mandible to the temporal bone at the side of the head. One of the most complicated joints in the body, it allows the jaw to open and close, move forward and backward, and from side to side.

Territory—the space we consider as belonging to us. The way that people handle space is largely determined by their culture.

Thermometer—*see glass thermometer.*

Thyroid gland—one of the endocrine glands, secretes thyroid hormone that controls the body's metabolic rate; located in the middle of the lower neck.

Triangulation—the widening of the periodontal ligament space (PDLs) caused by the resorption of bone along either the mesial or distal aspect of the interdental (interseptal) crestal bone as observed on a radiograph.

U

Ulcer—a craterlike lesion of the skin or mucosa where the top two layers of the skin are lost.

V

Verbal communication—the use of spoken, written, or sign language to exchange information between individuals.

Vesicle—a small blister filled with a clear fluid; usually 1 cm or less in diameter.

Vital signs—a person's temperature, pulse, respiration, and blood pressure.

W

Wheal—a raised, somewhat irregular area of localized edema; often itchy, lasting 24 hours or less; usually due to an allergic reaction, such as to a drug or insect bite.

White-coat (or office) hypertension—blood pressure that rises above its usual level when it is measured in a health care setting (such as a medical or dental office, where a health care provider may be wearing a white laboratory coat).

Withdrawal symptoms—the unpleasant symptoms experienced by a smoker when trying to quit smoking, such as craving for nicotine, irritability, anger, anxiety, fatigue, depressed mood, difficulty concentrating, restlessness, and sleep disturbance.

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